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Limnological Results from the 1981 British Columbia Lake Enrichment Program

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LIMNOLOGICAL RESULTS FROM THE 1981 BRITISH COLUMBIA LAKE ENRICHMENT PROGRAM

by

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ABSTRACT

Costella, A.C., B. Nidle, and K.S. Shortreed. 1983. Limnological results from the 1981 British Columbia Lake Enrichment Program. Can. MS Rep. Fish. Aquat. Sci. 1693: v + 277 p.

Results of the 1981 Limnology subprogram of the British Columbia Lake Enrichment Program (LEP) are presented. Twenty-five stations in 13 lakes were sampled from near-isothermal conditions in spring until fall overturn. Major inlet streams and outlets of four lakes were also sampled. Data are presented for each lake, station and date and summarized in the summary tables. Time-weighted means for the growing season are also included.

Key words: Lake Enrichment Program (LEP), lake fertilization, oligotrophic, dystrophic, humic-stained, glacially-turbid, warm monomictic, nutrients, bacteria, ultraphytoplankton, nanoplankton, phytoplankton, zooplankton, sediments, streams

RESUME

Costella, A. C., B. Nidle, and K. S. Shortreed. 1983. Limnological results from the 1981 British Columbia Lake Enrichment Program. Can. MS Rep. Fish. Aquat Sci. 1693: v + 277 p.

Le présent rapport porte sur les résultats obtenus en 1981 dans le cadre du sous-programme limnologique du Programme d'enrichissement des lacs (PEL) de la Colombie-Britannique. On a échantillonné 25 stations réparties dans 13 lacs, à partir du printemps, quand les conditions étaient presque isothermiques, jusqu'à l'inversion d'automne, ainsi que les principaux affluents et émissaires de quatre lacs. Les données pour chaque lac, chaque station et chaque date sont présentées et résumées dans les tableaux. Les moyennes pondérées en fonction du temps pour la saison de croissance sont aussi incluses.

Mots-clés: Programme d'enrichissement des lacs (PEL), fertilisation lacustre, oligotrophe, dystrophe, coloré d'acide humique, glaciaire turbide, monomictique chaud, bioéléments, bactéries, ultraphytoplancton, nanoplancton, phytoplancton, zooplancton, sédiments, cours d'eau.

PART I. MONITOR SURVEY

INTRODUCTION

The Lake Enrichment Program (LEP) of the Federal-Provincial Salmonid Enhancement Program (SEP) commenced in 1977 with the fertilization and study of six lakes and has since expanded with the fertilization of 11 lakes in 1981. In addition, Long and Sproat lakes were studied to obtain background data. Earlier work on many of these lakes and the rationale and objectives of these continuing studies have been previously reported by Stockner (1979), Stockner and Shortreed (1979), Stockner et al. (1980), Shortreed and Stockner (1981), MacIsaac et al. (1981), and Costella et al. (1982).

Data in this report are the results of the Limnology subprogram of the 1981 LEP. Field sampling and data collation were conducted under contract by J.E. Sager and Associates, Burnaby, B.C.

DESCRIPTION OF STUDY LAKES AND STREAMS

The 13 lakes sampled during 1981 represented a wide variety of trophic types and morphometric and hydrologic features (Table 1, Fig. 1). The Queen Charlotte Islands lakes and the majority of coastal lakes range from oligotrophic to moderately dystrophic and are warm monomictic; Kitlope Lake is oligotrophic and dimictic and Henderson Lake is oligotrophic and ectogenically meromictic (Hutchinson 1937). Water transparencies ranged from clear to glacially-turbid to moderately humic-stained. The lakes have relatively small littoral zones, low inorganic nutrient levels, low phytoplankton biomass (Shortreed and Stockner 1981), low bacterioplankton biomass (MacIsaac et al. 1981), and low zooplankton biomass (Rankin et al. 1979, Rankin and Ashton 1980).

The major inlet streams and the outlets of Bonilla, Curtis, Kennedy, and Long lakes were also sampled to assist development of nutrient budgets of these lakes. The transparency of the streams ranged from mildly to moderately humic-stained at Bonilla and Curtis lakes; clear to mildly humic-stained at Kennedy Lake; and clear to very humic-stained or glacially-turbid at Long Lake. The inlet streams at Long Lake were very humic-stained in early spring and as the season progressed became clear, except the Smokehouse Creek which became glacially-turbid by July. Maps showing station and stream locations are presented in Fig. 2-6 or in Costella et al. (1982).

METHODS

The lakes in this study were fertilized weekly with an aqueous solution of ammonium nitrate and ammonium phosphate with an N:P ratio of 15:1, throughout the growing season. Long Lake (which had been fertilized previously from 1977 to 1979) and Sproat Lake were sampled but not fertilized to obtain background data. The fertilizer was applied using a DC-6B water bomber in two

or three passes over the pelagic zone. Fertilizer loads to the lakes are presented in Table 1.

The main basins of each lake were sampled from near-isothermal conditions in spring until the onset of fall overturn. All lakes were sampled monthly with the exception of the Queen Charlotte Islands lakes (Awun, Eden, and Ian lakes) and Lowe Lake which were sampled twice during the season and Kitlope Lake which was sampled once. At Curtis, Kennedy, and Long lakes two inlet streams and the outlets were sampled monthly and at Bonilla Lake five inlet streams and the outlet were sampled monthly. A float-equipped de Havilland Beaver aircraft was used to sample all lakes and streams except Sproat Lake which was sampled by boat. The physical, chemical, and biological measurements collected at each station are summarized in Tables 2 and 3.

Temperature profiles to a maximum depth of 50 m were obtained at each station using a Montedoro-Whitney temperature probe (Model TC-5C) and buoyancy frequencies ($\cdot s^{-1}$) were calculated (Turner 1973). A Schmidt-type stability function ($kg \cdot s^{-2}$) was calculated to quantify the convective stability of our study lakes (cf Johnson and Merritt 1979). (In our calculation the integral of area as a function of depth is omitted).

$$S = g \sum_{0}^{50} (\rho_z - \bar{\rho}) (z - z_{\bar{\rho}}) \Delta z$$

where: S = Schmidt stability function (modified) ($kg \cdot s^{-2}$)
g = gravitational constant (9.8 $m \cdot s^{-2}$)
ρ_z = density of water at depth z ($g \cdot cm^{-3}$)
$\bar{\rho}$ = mean density of the water column ($g \cdot cm^{-3}$)
z = depth (m)
$z_{\bar{\rho}}$ = depth where mean density occurs (m)
Δz = change in depth (m)

The densities of lake water used for determining buoyancy frequencies ($\cdot s^{-1}$), and the Schmidt stability function ($kg \cdot s^{-2}$) were calculated using water temperature (^{o}C) and the equation of state given by Chen and Millero (1977).

A Li-Cor light meter (Model 185A) equipped with a Li-Cor underwater quantum sensor (Model Li-192S) was used to measure photosynthetically active radiation (PAR: 400-700 nm) from the surface to the compensation depth (1% of surface intensity) and vertical light extinction coefficients were calculated. A standard 22-cm white Secchi disc was used to measure water transparency.

A 6-L Van Dorn bottle, rinsed with 95% ethanol, was used to collect all lake water samples. Samples were usually collected between 0900 and 1200 h. An unfiltered portion of the sample was placed into a clean, rinsed test tube, stored in the dark at 4°C, and analyzed later for total phosphorus. Samples for the remaining nutrients and chlorophyll were stored for 2 to 4 h in 1-L or 2-L polyethylene bottles and kept cold and in the dark. At the field laboratory 55-mm Whatman GFF filters, which had been previously ashed and washed with 500 mL distilled water, were used to filter the nutrient samples. The

filter was placed in a 47-mm Swinnex (Millipore Corp.) filtering unit. An additional 500 mL distilled water were passed through the filter followed by 50-mL aliquots from 20, 5, 3, and 1 m. One filter was generally used to filter all the samples from each station unless high algal biomass inhibited filtering efficiency. A glass bottle was rinsed then filled with 100 mL filtered sample, covered with aluminum foil and capped tightly. This sample was analyzed later for nitrate and dissolved organic nitrogen. Approximately 100 mL of sample was filtered into a rinsed, plastic bottle and analyzed later for soluble reactive silicon, ammonia, and total dissolved solids. Two 25-mL test tubes were rinsed and filled with filtered sample, one for total dissolved phosphorus analysis and the other for dissolved organic carbon (DOC) analysis. Ten µL of mercuric chloride solution (10 $g \cdot L^{-1}$) were added to the tube for DOC analysis and the tube capped with ashed aluminum foil. All samples except those for DOC analysis were stored cold and in the dark and all chemical analyses were done according to the methods of Golterman (1969).

A 1-L sample was filtered through an ashed 47-mm diameter Whatman GFF filter. Filters were folded in half, dried in a dessicator overnight, then stored frozen and analyzed later for particulate carbon and particulate nitrogen using a Perkin-Elmer CHN Analyzer (Model 240). A 500-mL sample was filtered under subdued light through a 47-mm diameter, 0.8-µm Millipore filter and a few drops of a $MgCO_3$ suspension were added. Filters were folded in half, dried in a dessicator overnight, then stored frozen and analyzed later for total chlorophyll using a Turner fluorometer (Model 111) using the method of Strickland and Parsons (1972).

At selected stations (Long-2, Kennedy-1, and -2), where primary productivity was measured, glass jars were filled completely with water (generally from 2 m and 7.5 m), covered with parafilm and transported to the field laboratory. These samples were used to measure pH and total alkalinity according to the standard potentiometric method of APHA (1976). Dissolved inorganic carbon (DIC) was estimated indirectly from pH, temperature, total dissolved solids, and bicarbonate alkalinity (APHA 1976). At additional stations (Bonilla-2 and Curtis-2) where primary productivity was also measured, samples for DIC analysis were collected from eight depths in 50-cc plastic syringes and 0.5 mL of 1.0 N H_2SO_4 was added in the field; then the samples were transported to the field laboratory. Samples and standards for DIC were analyzed using a Carle Gas Chromatograph (Model 211 M) using the method of Stainton et al. (1977). Standards were prepared daily from a factory standard (1000 mg $C \cdot L^{-1}$) and deionized water. Duplicates of each standard were made (5, 2, 0.5 mg $C \cdot L^{-1}$, and a blank) and 0.5 mL of 1.0 N H_2SO_4 was added. To each standard and sample 30 mL of Helium gas (zero grade) were added then the sample agitated for approximately 15 s. Syringes were then placed into an ice bath for a minimum of 10 min prior to injection into the gas chromatograph.

A test tube rinsed with 95% ethanol was rinsed and filled with sample water for bacteria enumeration. In the field laboratory 5 mL were filtered onto a 25-mm diameter, 0.2-µm Nuclepore membrane filter counter-stained with Irgalan Black. Filters were removed when just dry and placed into a 9-cm divided petrie dish lined with Whatman filter paper, air dried at room temperature (approximately 20°C) and stored. Samples were counted later under

epifluorescence using the acridine orange direct count (AODC) method as described by MacIsaac et al. (1981). Results are expressed as numbers·mL^{-1}.

Samples for ultraphytoplankton (<3 µm equivalent spherical diameter) biomass were collected from 1, 3, 5, and 20 m in opaque, 125-mL polyethylene bottles and transported to the field laboratory where 15 mL of each sample were filtered under subdued light onto a pre-stained (Irgalan Black), 25-mm diameter, 0.2-µm Nuclepore membrane filter in the same manner as for bacteria biomass. Filters were then air-dried and stored in opaque, 9-cm petrie dishes until counts were made at 1250 X magnification using a Zeiss compound microscope (Model KLSM) equipped with epifluorescence. Approximately 20 to 30 random fields were counted and values were converted to numbers·m^{-3} and volume (mm^3·m^{-3}). A minimum of 100 cells were counted per sample.

Phytoplankton samples from 1, 3, 5, and 20 m were collected in opaque, 125-mL polyethylene bottles and fixed with a few drops of Lugol's acid solution. Samples from 1, 3, and 5 m (plus 20 m from Great Central-2 and Sproat-1, -2, -3, and -4) were shaken and allowed to settle overnight in 27-mL settling chambers. One transect at 187.5 X and one at 750 X magnification were counted using a Wild M40 inverted microscope equipped with phase contrast microscopy (Utermöhl 1958). Counts were converted to numbers·m^{-3} and volume (mm^3·m^{-3}). The total carbon content of the ultraphytoplankton and phytoplankton was calculated from cell volume using the equations of Strathmann (1967) and expressed as mg C·m^{-3}. Total algal numbers, volume, carbon and nanoplankton (maximum dimension of 20µ) numbers, volume and carbon data are listed.

Total primary productivity and heterotrophic activity were measured at selected stations (Bonilla-2, Curtis-2, Kennedy-1 and -2, and Long-2) at eight depths in the water column (Table 2). Two 125-mL light bottles were filled from each of the eight depths plus two dark bottles from 1, 3, 5, and 20 m and an additional light bottle from 1, 3, 5, and 20 m to be used as time-zero blanks for ^{3}H-glucose uptake. One light and one dark bottle from each depth were inoculated with 1 mL of ^{14}C-bicarbonate radioisotope stock solution containing approximately 2 µCi·mL^{-1} (74 kBq·mL^{-1}). The other light and dark bottles (not the blanks) were inoculated with 1 mL sterile ^{3}H-glucose stock solution (specific activity of 30 µCi·mmol^{-1}) containing approximately 3.4 µCi·mL^{-1} (125 kBq·mL^{-1}). Activity of the radioisotopes were determined by inoculating three scintillation vials containing 15 mL of scintillation cocktail (14:1, Aquasol-2:phenethylamine) with 1 mL of ^{14}C-bicarbonate stock solution and three vials with 1 mL sterile ^{3}H-glucose stock solution. Samples were incubated at their respective depths for approximately 2 h, generally between 0900 and 1200 h. After incubation, samples were retrieved, placed in light tight boxes and transported to the field laboratory where filtration started within 2 h after incubation stopped. Sterifil (Millipore Corp.) filtering units were used as follows: a wetted Sartorius glass fiber filter was placed on the filter holder base and support screen to absorb any unassimilated radioisotope. A pool of water was put on top of the glass fiber filter and a 47-mm diameter, 0.2-µm Nuclepore membrane filter was placed on top. The funnel was then screwed down tightly and vacuum applied. A 30-mL aliquot of each sample for ^{14}C-uptake and 50-mL aliquots for ^{3}H-glucose uptake were filtered at a vacuum not exceeding 20 cm Hg. With the vacuum still applied,

filters were removed and placed into scintillation vials containing 15 mL of the scintillation cocktail. At these stations size-fractionated primary production was also measured with 30-mL aliquots of the samples from 1, 3, and 5 m, light and dark bottles filtered in the same manner using 47-mm diameter, 3-µm and 8-µm Nuclepore membrane filters. After all samples were filtered, the ^{3}H-glucose stock solution was filtered twice through a 47-mm diameter, 0.2-µm Nuclepore membrane filter. One mL of the ^{3}H-glucose stock solution was added to each of the four blank bottle samples and a 50-mL aliquot was immediately filtered in the same manner as the other samples. All vials were stored cold in the dark and counted later in a Packard Tri-Carb 460C Liquid Scintillation system. Quench series for both ^{14}C-bicarbonate and ^{3}H-glucose were composed of the same cocktail and filters as used for samples. Strickland's (1960) equation was used to calculate volumetric primary production as mg $C \cdot m^{-3} \cdot h^{-1}$ and areal primary production as mg $C \cdot m^{-2} \cdot h^{-1}$. Hourly volumetric production was converted to daily areal production (mg $C \cdot m^{-2} \cdot d^{-1}$) using light data collected in the field with Li-Cor printing integrators (Model 550) equipped with Li-Cor quantum light sensors (Model 190S) which were installed at Bonilla, Kennedy, and Long lakes. Light data collected at Bonilla Lake was used to calculate areal production at Curtis Lake. Heterotrophic activity was measured by calculating the turnover time of the ^{3}H-glucose as described by MacIsaac et al. (1981). Results were expressed in hours on the raw data tables and as geometric means ($\log_{10}$) of the epilimnetic values on the summary tables.

Zooplankton were sampled at every station using a 100-µm mesh size SCOR-UNESCO net (mouth area = 0.25 m^2) which was hauled vertically at approximately 0.5 $m \cdot s^{-1}$ from 25 m for the northern lakes (Awun, Bonilla, Curtis, Eden, Ian, Kitlope, and Lowe) and 50 m for most southern lakes (Great Central, Henderson, Hobiton, Kennedy, Long-1 and -2, and Sproat-1, -3, and -4). The depth from which zooplankton samples were taken at Long-3 and Sproat-2 varied from 40 to 50 m. All samples were preserved in a borax-buffered, 4% formalin-sucrose solution (Haney and Hall 1973). In the laboratory each sample was split in half using a Folsom plankton splitter. One portion was filtered onto a pre-weighed Whatman GFC filter, dried to a constant weight at 90°C for 24 h and weighed. Volumetric zooplankton biomass was expressed as mg dry weight $\cdot m^{-3}$ and areal zooplankton biomass as mg dry weight $\cdot m^{-2}$. No corrections were made for possible algal contamination of the samples. The other portion of the sample was used for zooplankton identification and enumeration. Only zooplankton biomass data are presented in this report.

Sediment samples were obtained from Bonilla-1, -2, -3, Curtis-1, -2, -3, Great Central-2, Kennedy-1, -2, and Sproat-1 using a modified Petersen grab with a volume of 0.0023 m^3. Samples were dried to a constant weight at 105°C and analyzed for total phosphorus. Results were expressed as µg $P \cdot g^{-1}$ dry weight.

The major inlet streams and the outlets of Bonilla, Curtis, Kennedy, and Long lakes were sampled monthly for surface temperature, nutrients, and bacteria biomass as well as turbidity and flow observations (Tables 2 and 3). Generally, water samples from the inlet streams were taken far enough upstream where there was discernable flow to ensure that the samples were stream water. Outlet samples were more difficult to obtain but were taken as far downstream

as possible.

RESULTS

Results are presented as monthly means in the summary tables (Tables 4-43) and as time-weighted means for the growing season (Tables 44-55). The growing season limits are defined as starting when the surface temperature reaches 8°C in the spring and ends when it falls to 12°C in the fall. Raw data tables for each lake, station, and date are presented in Part II of this report (Appendix Tables 1-200).

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Table 1. Geographic and hydrologic data from, and fertilizer additions to, the 1981 study lakes.

Lake	Latitude (N)	Longitude (W)	Elevation (m)	Lake area (km^2)	Mean depth (m)	Water Residence Time (y)	Fertilizer Load (mg $P \cdot m^{-2} \cdot wk^{-1}$)
Awun[a]	53°36'	132°35'	51	4.9	47	0.9	3.92
Bonilla[a]	53°31'	130°15'	10	2.3	34	1.0	14.78
Curtis[a]	53°30'	129°50'	10	3.0	34	0.6	9.33
Eden[a]	53°51'	132°43'	70	5.9	43	0.9	3.39
Great Central[a]	49°22'	125°15'	82	51.0	212	7.3	2.76
Henderson[a]	49°05'	125°02'	15	15.0	109 (43)[c]	3.2 (1.3)[c]	5.64
Hobiton[a]	48°45'	124°49'	15	3.6	36	1.0	3.95
Ian[a]	53°45'	132°35'	116	20.0	50	1.1	2.52
Kennedy-Clayoquot[b]	49°08'	125°35'	12	17.0	51	1.7	6.62
Kennedy-Main[b]	49°04'	125°30'	12	47.0	27	0.9	0
Kitlope[a]	53°07'	127°13'	15	12.0	86	0.4	8.06
Long[a]	51°14'	127°10'	15	21.0	73	1.1	0
Lowe[a]	53°34'	129°33'	10	3.7	25	0.2	7.35
Sproat[d]	49°14'	125°06'	29	41.0	59	8.0	0

[a] data from Shortreed and Stockner (1981).
[b] data from Stockner et al. (1980).
[c] numbers in brackets are the result of calculating lake volume using only the mixolimnion.
[d] data from Duval and Murray (1976).

Table 2. Physical, chemical and biological measurements collected at each lake and stream during the 1981 field season.

Lake and station	Measurements[a]	Depths sampled (m)	Number of sampling dates
Awun	A,B,E,F,H	1,3,5,20	2
Bonilla-1	A,D,E,F,G,H	1,3,5,20	8
Bonilla-2	A,D,E,F,G,H,J	0,1,2,3,5,7.5,10,20[b]	8
Bonilla-3	A,D,E,F,G,H	1,3,5,20	8
Curtis-1	A,D,E,F,G,H	1,3,5,20	7
Curtis-2	A,D,E,F,G,H,J	0,1,2,3,5,7.5,10,20[b]	8
Curtis-3	A,D,E,F,G,H	1,3,5,20	7
Eden	A,B,E,F,H	1,3,5,20	2
Great Central-1	A,C,E,F,G,I	1,3,5,20	8
Great Central-2	A,C,E,F,G,I	1,3,5,20	8
Henderson	A,C,E,F,G,I	1,3,5,20	8
Hobiton	A,C,E,F,G,I	1,3,5,20	8
Ian-1	A,B,E,F,H	1,3,5,20	2
Ian-2	A,B,E,F,H	1,3,5,20	2
Kennedy-1	A,D,E,F,G,I,J	0,1,3,5,7.5,10,20,30[b,c]	8
Kennedy-2	A,D,E,F,G,I,J	0,1,3,5,7.5,10,20,30[b,c]	8
Kitlope	A,B,E,F,H	1,3,5,20	1
Long-1	A,D,E,F,G,I	1,3,5,20	7
Long-2	A,D,E,F,G,I,J	0,1,2,3,5,7.5,10,20[b]	7
Long-3	A,D,E,F,G,I	1,3,5,20	7
Lowe	A,B,E,F,H	1,3,5,20	2
Sproat-1	A,C,E,F,G,I	1,3,5,20	8
Sproat-2	A,C,E,F,G,I	1,3,5,20	8
Sproat-3	A,C,E,F,G,I	1,3,5,20	8
Sproat-4	A,C,E,F,G,I	1,3,5,20	8
All streams	D,G	subsurface	variable

[a] legend for measurements is on Table 3.
[b] primary production was measured at eight depths, nutrients at 1,3,5 and 20 m, and dissolved inorganic carbon (DIC) generally at 2 and 7.5 m.
[c] these depths were sampled in April, May and June, however from July through to October the eight depths sampled were 0,1,2,3,5,7.5,10 and 20 m.

Table 3. Legend for physical, chemical and biological measurements collected during the 1981 field season.

Symbol	Measurements collected
A	- physical measurements (Secchi depth, 0-50 m temperature profile, light profile to compensation depth)
B	- basic nutrient chemistry (ammonia, nitrate, dissolved organic nitrogen, total phosphorus, total dissolved phosphorus, soluble reactive silicon)
C	- advanced nutrient chemistry (B above plus particulate carbon, particulate nitrogen, total dissolved solids, pH, dissolved inorganic carbon)
D	- C above plus dissolved organic carbon
E	- total chlorophyll
F	- phytoplankton identification and enumeration at 1, 3 and 5 m (plus 20 m for Great Central-2, Sproat 1-4) and ultraphytoplankton enumeration at 1, 3, 5 and 20 m.
G	- bacteria biomass
H	- Zooplankton biomass (vertical haul 0-50 m)
I	- Zooplankton biomass (vertical haul 0-25 m)
J	- Primary production and heterotrophic activity

Table 4. Monthly sampling dates for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	25				21			
Bonilla-1	26	30	26	23	24	27	23	28
Bonilla-2	26	30	26	23	24	27	23	28
Bonilla-3	26	30	26	23	24	27	23	28
Bonilla St. A	26	30	26	23	24	27	23	28
Bonilla St. B	26	30	26	23	24	27	23	28
Bonilla St. C	26	30	26	23	24	27	23	28
Bonilla St. D	26	30	26	23	24	27	23	28
Bonilla St. E	26	30	26	23	24	27	23	28
Curtis-1		29	27	24	22	26	22	27
Curtis-2	28	29	27	24	22	26	22	27
Curtis-3		29	27	24	22	26	22	27
Curtis St. A	28	29	27	24	22	26	22	27
Curtis St. B	28	29	27	24	22	26	22	27
Curtis St. C	28	29	27	24	22	26	22	27
Eden	25				21			
Great Central-1	13	8	13	10	9	13	10	17
Great Central-2	13	8	13	10	9	13	10	17
Henderson	12	8	13	10	9	13	10	17
Hobiton	12	8	13	10	9	13	10	17
Ian-1	25				21			
Ian-2	25				21			
Kennedy-1	12	9	14	11	8	12	11	20
Kennedy-2	12	9	14	11	8	12	11	20
Kennedy St. A	12	9	14	11	8	12	11	20
Kennedy St. B	12	9	14	11	8	12	11	20
Kennedy St. C	12	9	14	11	8	12	11	20
Kitlope						28		
Long-1	10	7	12	9	7	11	9	
Long-2	10	7	12	9	7	11	9	
Long-3	10	7	12	9	7	11	9	
Long St. A	10	7	12	9	7	11	9	
Long St. B	10	7	12	9	7	11	9	
Long St. C	10	7	12	9	7	11	9	
Lowe	28					28		
Sproat-1	13	10	15	12	10	17	12	16
Sproat-2	13	10	15	12	10	17	12	16
Sproat-3	13	10	15	12	10	17	12	16
Sproat-4	13	10	15	12	10	17	12	16

Table 5. Monthly surface temperature (°C) values for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	6.8				20.1			
Bonilla-1	6.8	7.3	11.8	13.7	18.0	17.3	14.1	10.0
Bonilla-2	6.4	7.0	12.5	13.8	17.6	17.1	13.8	10.3
Bonilla-3	6.7	8.2	12.4	13.7	17.3	16.8	14.0	10.0
Bonilla St. A	7.1	10.0	13.6	13.2	18.0	14.4	11.7	7.8
Bonilla St. B	6.6		14.1	13.7	18.0	16.8		8.0
Bonilla St. C	5.8	7.7	10.0	13.0	16.5	15.0	10.6	7.0
Bonilla St. D	5.3	7.5	9.7	10.1	13.5	12.3	10.4	6.4
Bonilla St. E	6.4	8.6	13.2	13.7	17.8	16.9	13.9	10.0
Curtis-1		6.3	12.5	14.3	18.5	17.3	13.6	9.6
Curtis-2	5.3	6.5	12.9	14.3	18.7	16.7	13.9	10.0
Curtis-3		6.7	13.3	14.3	18.0	17.1	13.8	9.6
Curtis St. A		7.0	12.5	13.8		15.0	13.0	8.7
Curtis St. B	5.8	6.8	12.9	13.2	18.9	16.5	13.3	8.4
Curtis St. C	5.5	7.0	13.2	14.3	17.5	17.0	13.8	10.0
Eden	5.7				18.1			
Great Central-1	7.9	8.4	12.6	15.0	17.1	24.4	19.9	13.4
Great Central-2	7.8	7.8	12.5	14.9	16.9	23.5	20.0	13.8
Henderson	9.4	8.9	11.0	13.7	16.6	22.3	18.5	14.8
Hobiton	8.9	8.5	12.0	14.8	17.0	23.2	18.8	13.0
Ian-1	5.8				16.2			
Ian-2	6.0				16.5			
Kennedy-1	9.4	8.8	12.2	15.3	18.2	25.3	20.1	12.1
Kennedy-2	8.2	8.6	12.0	14.4	18.0	24.8	18.9	12.3
Kennedy St. A	7.2	8.0	8.8	9.2	13.3	22.8	17.9	12.1
Kennedy St. B	7.1	6.5	9.6	10.4	15.6	24.0	18.2	10.7
Kennedy St. C	8.1	8.3	12.1	14.6	16.1	25.8	21.7	13.6
Kitlope						12.3		
Long-1	5.0	5.8	10.2	12.1	13.3	20.4	17.9	
Long-2	5.7	6.1	10.0	13.6	14.4	19.6	18.4	
Long-3	6.9	6.2	10.0	13.5	13.9	20.9	18.8	
Long St. A	4.8	3.9	6.9	7.9	8.8	12.6	11.6	
Long St. B	5.8	4.7	5.8	8.1	9.2	15.6	13.9	
Long St. C	5.6	6.4	9.2		13.7	19.7	19.3	
Lowe	5.4					17.5		
Sproat-1	7.6	7.5	11.8	15.0	17.4	23.9	19.5	13.4
Sproat-2	8.1	9.1	14.1	16.2	18.4	24.1	20.2	13.4
Sproat-3	7.9		13.0	15.3	17.7	24.4	19.9	13.5
Sproat-4	8.3	9.3	13.6	15.9	18.4	25.0	19.9	13.3

Table 6. Monthly mean (0-10 m) water temperature (°C) values for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	5.9				16.8			
Bonilla-1	6.1	6.9	10.9	12.8	16.8	16.3	13.7	
Bonilla-2	6.1	6.9	11.2	12.8	16.4	16.4	13.6	10.2
Bonilla-3	6.2	7.9	11.8	12.8	16.2	16.2	13.7	9.8
Curtis-1		6.1	10.5	12.3	16.5	15.6	13.4	9.4
Curtis-2		6.3	11.0	12.5	15.9	15.3	13.5	9.8
Curtis-3		6.3	11.4	12.4	15.9	15.4	13.4	9.5
Eden	5.6				16.4			
Great Central-1	6.5	8.1	11.2	14.4	16.6	21.7	19.5	13.2
Great Central-2	6.5	7.2	11.6	14.1	16.3	21.6	19.2	13.4
Henderson	7.8	8.7	10.7	13.5	16.3	21.4	18.4	13.5
Hobiton	8.0	8.3	11.0	13.4	15.2	19.3	17.0	12.6
Ian-1	5.8				15.8			
Ian-2	6.0				16.3			
Kennedy-1	8.0		11.6	13.1	16.0	19.8	17.0	11.6
Kennedy-2	7.7		11.6	14.0	16.7	21.8	17.8	12.2
Kitlope						11.3		
Long-1	4.9	5.7	8.4	10.2	12.6	19.6	16.7	
Long-2	5.4	5.9	8.9	11.4	12.6	19.1	17.4	
Long-3	5.8	6.2	8.6	11.7	12.7	18.8	17.6	
Lowe						17.2		
Sproat-1	7.3	7.6	11.2	14.2	16.8	22.0	19.1	13.2
Sproat-2	7.4	9.1	12.8	14.7	17.3	22.4	19.4	13.2
Sproat-3	7.4	8.8	12.0	14.5	16.7	22.5	19.2	13.2
Sproat-4	7.7	9.2	13.0	14.2	17.3	21.6	19.4	13.1

Table 7. Monthly values of depth of maximum stability (m) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	U[a]				4.0			
Bonilla-1	U	U	9.2	6.0	8.2	9.0	14.0	22.0[b]
Bonilla-2	U	U	10.8	6.4	7.8	8.4	17.0	25.2
Bonilla-3	U	U	7.0	10.8	8.2	11.7	17.0	22.0
Curtis-1		U	6.2	5.8	5.0	9.7	11.2	19.8
Curtis-2	U[b]	U	6.4	6.4	5.0	6.6	15.8	20.2
Curtis-3		U	5.9	8.8	6.0	7.7	12.3	20.0
Eden	U				5.1			
Great Central-1	U	U	11.4	9.9	9.6	7.6	11.8	17.0
Great Central-2	U	U	14.0	11.8	9.0	6.4[c]	10.0	16.5
Henderson	U	U	15.8	12.7	13.5	20.6	16.0	22.6
Hobiton	U	17.5	6.6	5.8	7.2	4.8	8.6	14.6
Ian-1	U				10.0			
Ian-2	U				12.2			
Kennedy-1	6.5		6.0	4.4	5.4	3.0	7.2	18.2
Kennedy-2	U		11.1	13.8	7.6	5.1	10.8	16.6
Kitlope						13.3		
Long-1	U	U	U	5.4	10.9	11.9	5.8	
Long-2	U	U	U	U	13.0	11.0	11.1	
Long-3	U	U	U	U	18.9	5.8	7.8	
Lowe	U[b]					11.0		
Sproat-1	6.5	27.0	8.4	11.7	8.9	7.5[c]	10.1	12.0
Sproat-2	6.5	12.5	8.4	5.8	9.2	10.0	9.0	16.6
Sproat-3	7.5	11.5	8.4	7.8	12.2	8.4	9.9	16.1
Sproat-4	U	22.0	10.3	5.0	7.2	3.8	11.0	13.2

[a] U denotes an unstable water column with no depth of maximum stability clearly defined.

[b] estimated value.

[c] mean values of 2 dates.

Table 8. Monthly values of mean epilimnetic buoyancy frequency ($\cdot s^{-1}$) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	0.005				0.060			
Bonilla-1	0.004	0.006	0.016	0.020	0.044	0.027	0.016	
Bonilla-2	0.007	0.003	0.021	0.023	0.069	0.027	0.030	0.011
Bonilla-3	0.005	0.005	0.016	0.020	0.043	0.038	0.028	0.012
Curtis-1		0.003	0.031	0.026	0.075	0.028	0.028	0.011
Curtis-2		0.002	0.041	0.024	0.068	0.050	0.025	0.021
Curtis-3		0.003	0.040	0.028	0.049	0.040	0.029	0.021
Eden	0.002				0.041			
Great Central-1	0.005	0.005	0.021	0.046	0.030	0.048	0.071	0.023
Great Central-2	0.005	0.005	0.016	0.022	0.034	0.041[a]	0.058	0.020
Henderson	0.006	0.004	0.010	0.031	0.031	0.038	0.059	0.023
Hobiton	0.006	0.006	0.019	0.064	0.045	0.054	0.063	0.019
Ian-1	0.001				0.021			
Ian-2	0.002				0.038			
Kennedy-1	0.011		0.010	0.042	0.058	0.094	0.054	0.013
Kennedy-2	0.005		0.014	0.025	0.049	0.108	0.045	0.012
Kitlope						0.016		
Long-1	0.001	0.002	0.010	0.024	0.018	0.045	0.037	
Long-2	0.002	0.002	0.011	0.020	0.022	0.054	0.024	
Long-3	0.004	0.001	0.012	0.022	0.017	0.043	0.031	
Lowe						0.053		
Sproat-1	0.005	0.004	0.021	0.029	0.057	0.043[a]	0.061	0.017
Sproat-2	0.010	0.006	0.024	0.027	0.043	0.045	0.040	0.020
Sproat-3	0.008	0.011	0.019	0.032	0.040	0.047	0.062	0.018
Sproat-4	0.006	0.008	0.020	0.043	0.031	0.067	0.048	0.017

[a] mean of 2 values.

Table 9. Monthly values of the modified Schmidt stability function ($kg \cdot s^{-2}$) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	254				8756			
Bonilla-1	0	352	1792	3155	5609	5098	1932	
Bonilla-2	61	212	2685	3047	5506	5131	2232	673
Bonilla-3	350	490	1800	3200	5850	4783	2578	625
Curtis-1		150	3065	4039	8310	5740	2450	724
Curtis-2		82	2959	3774	7542	5022	2817	571
Curtis-3		91	3656	4012	8195	6004	2878	522
Eden	0				7814			
Great Central-1	237	453	2249	2764	5126	10483	5032	2041
Great Central-2	237	161	1816	2712	4411	8386[a]	5728	2055
Henderson	265	115	670	2040	3708	6534	4663	1986
Hobiton	409	454	2064	4128	6561	11786	7176	1870
Ian-1	0				5329			
Ian-2	0				4074			
Kennedy-1	325		3176	4563	7917	16806	10231	1403
Kennedy-2	212		1469	2953	6622	12142	6057	1335
Kitlope						1619		
Long-1	12	58	1174	2999	2921	7343	4970	
Long-2	42	59	1224	3042	2829	5793	5800	
Long-3		50	1611	3325	2574	8348	6172	
Lowe						5519		
Sproat-1	380	281	1831	3163	5058	10164[a]	6276	2077
Sproat-2	279	454	4471	5916	6738	11164	6828	2163
Sproat-3	357	514	2954	3898	5009	10602	5873	2023
Sproat-4	457	535	2544	4402	6638	11445	6071	2167

[a] mean of 2 values.

Table 10. Monthly Secchi depth (m) values for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	4.5							
Bonilla-1	4.0		2.5	2.5		1.5	2.5	3.0
Bonilla-2	4.5		3.0	2.0			3.5	3.0
Bonilla-3	3.5	3.0	2.0	2.0		2.0	3.0	2.5
Curtis-1			3.5	3.5			3.0	4.0
Curtis-2	5.5	4.5	4.0	3.5			3.0	2.0
Curtis-3		3.5	4.0	3.5	4.5	3.5	2.5	4.0
Eden	3.2				3.5			
Great Central-1	10.0	9.0	6.0	6.5	10.0	9.0	11.0	9.0
Great Central-2	8.0	8.0	6.0	6.5	8.5	9.0	11.0	8.5
Henderson	7.2	6.0	6.5	4.5	6.0		7.0	6.0
Hobiton	6.0	6.0	6.0	6.5	6.0	5.0	5.5	
Ian-1	3.0							
Ian-2	2.2							
Kennedy-1	6.0	5.5	5.0	5.5	3.5	2.5	1.0	4.5
Kennedy-2	5.0	5.0	6.0	6.0	6.0	6.0	7.0	6.5
Kitlope						2.0		
Long-1	4.5	5.0	5.0	4.0	5.0	5.5	5.0	
Long-2	5.5	5.5	4.5	4.5	5.0	5.5	6.0	
Long-3	6.0	5.5	5.5	4.5	4.5	4.0	6.5	
Lowe	6.5					5.0		
Sproat-1	9.5	8.0	10.0	13.5	11.0	14.5	14.5	11.0
Sproat-2	7.0	7.5	10.5	11.5	13.0		13.5	9.0
Sproat-3		8.0	12.5	11.0	12.0	15.0	14.0	11.0
Sproat-4	8.0	8.0	14.0	12.0	13.0	14.5	14.5	7.0

Table 11. Monthly mean extinction coefficient (k_e) values for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	0.86				0.98			
Bonilla-1	0.96	0.89	0.94	1.03		1.28	1.34	
Bonilla-2	0.97	0.96	1.03	1.03	1.12	1.17	1.16	1.72
Bonilla-3	1.00	0.84	0.98	1.02	0.96	1.21	1.23	
Curtis-1		0.65	0.59	0.72	0.78	0.77	0.89	
Curtis-2	0.63	0.68	0.56	0.66	0.67	0.85	0.80	
Curtis-3		0.65	0.57	0.68	0.87	0.82	0.86	
Eden	1.00				0.95			
Great Central-1	0.39	0.36	0.25	0.37	0.25	0.31	0.28	0.38
Great Central-2	0.36	0.41	0.25	0.35	0.27	0.27	0.30	0.54
Henderson	0.51	0.46	0.51	0.47	0.48	0.47	0.51	0.64
Hobiton	0.58	0.49	0.53	0.59	0.55	0.46	0.60	0.60
Ian-1	0.95				1.07			
Ian-2	1.39				1.36			
Kennedy-1	0.51	0.44	0.76	0.60	0.51	0.82	1.66	0.92
Kennedy-2	0.57	0.55	0.65	0.52	0.44	0.46	0.48	0.76
Kitlope						0.53		
Long-1	0.62	0.61	0.71	0.66	0.49		0.51	
Long-2	0.69	0.64	0.70	0.69	0.53		0.48	
Long-3	0.62	0.59	0.63	0.86	0.64		0.38	
Lowe	0.53				0.57			
Sproat-1	0.38	0.34	0.35	0.28	0.24	0.23	0.24	0.31
Sproat-2	0.37		0.25	0.27	0.23	0.23	0.24	0.25
Sproat-3	0.31		0.26	0.23	0.18	0.21	0.22	
Sproat-4	0.31		0.27	0.27	0.24	0.23	0.23	0.29

Table 12. Monthly compensation depth (m) values for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	4.8				4.5			
Bonilla-1	4.3	4.9	4.5	4.1		3.4	3.3	
Bonilla-2	4.3	4.7	4.1	4.1	3.9	3.6	3.7	2.7
Bonilla-3	4.3	5.8	4.3	4.1	4.6	3.6	3.5	
Curtis-1		6.6	7.0	6.1	5.7	5.5	4.9	
Curtis-2	6.9	6.3	7.6	6.4	6.4	5.0	5.3	
Curtis-3		6.5	7.4	6.6	4.3	5.4	4.9	
Eden	4.2				4.5			
Great Central-1	11.2	11.6	15.7	10.9	16.6	13.5	14.7	11.1
Great Central-2	12.0	10.6	15.7	11.4	14.7	14.6	13.7	8.1
Henderson	8.6	8.8	8.0	8.6	8.5	8.7	7.9	6.5
Hobiton	7.4	8.4	7.7	7.0	7.3	8.6	6.6	6.8
Ian-1	4.5				3.9			
Ian-2	3.0				3.1			
Kennedy-1	8.5	9.4	5.9	6.8	7.8	5.3	2.4	4.8
Kennedy-2	7.0	7.6	6.8	7.8	9.0	9.2	8.5	5.5
Kitlope						8.4		
Long-1	7.0	7.2	5.6	6.4	8.3		8.4	
Long-2	6.0	6.5	5.9	6.0	7.2		8.6	
Long-3	6.8	7.1	6.7	5.1	6.7		9.9	
Lowe	8.0					7.3		
Sproat-1	10.9	12.4	10.7	15.3	16.7	18.6	16.3	13.3
Sproat-2	12.2		16.4	16.2	18.1	18.5	17.7	16.5
Sproat-3	14.5		15.2	18.4	22.9	20.9	19.1	8.5
Sproat-4	13.8		13.7	15.8	19.3	19.1	18.6	14.4

Table 13. Monthly mean (2 and 7.5 m) pH values for Kennedy-1, -2 and Long-2 for 1981.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Kennedy-1	6.6	7.0	7.6	7.2	8.0	9.6	7.0
Kennedy-2	6.4	6.2	7.3	6.9	7.1	7.6	6.9
Long-2	6.8	6.5	6.1	6.6	6.7	6.8	

Table 14. Monthly mean (2 and 7.5 m) total alkalinity ($mg \cdot L^{-1} CaCO_3$) values for Kennedy-1, -2 and Long-2 for 1981.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Kennedy-1	12.64	13.22	13.75	14.47	12.60	14.22	13.88
Kennedy-2	8.98	9.36	10.00	10.17	10.04		10.50
Long-2	3.00	3.18	2.87	3.43	2.31	2.87	

Table 15. Monthly values of mean epilimnetic dissolved inorganic carbon ($mg\ C \cdot L^{-1}$) for the 1981 study lakes.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-2[a]	0.37	0.30	0.24	0.61	0.46	0.55	0.84
Curtis-2[a]	0.31	0.28	0.43	0.49	0.68	0.76	0.70
Kennedy-1[b]	5.31	4.07	3.54	3.98	3.58	3.42	4.35
Kennedy-2[b]	4.53	3.30	2.76	3.18	2.90		3.42
Long-2[b]	1.08	1.56	2.13	1.39	0.80	0.95	

[a] Dissolved inorganic carbon values determined directly using the Carle Gas Chromatograph according to the method of Stainton et al. (1977).
[b] Dissolved inorganic carbon values determined indirectly according to the potentiometric method of APHA (1576).

Table 16. Monthly values of mean epilimnetic dissolved organic carbon (mg $C \cdot L^{-1}$) for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-1	5.2	5.1	4.2	5.9	5.5	5.6	3.8	4.1
Bonilla-2	8.3	5.5	4.4	4.7	6.1	6.1	5.9	3.5
Bonilla-3	8.6	5.6	4.6	3.1	7.2	6.1	5.7	3.3
Bonilla St. A	6.6	9.0	6.9	13.8	8.0	9.5	8.0	8.3
Bonilla St. B	6.5	6.8	6.7	5.4	8.0	10.1	9.4	7.8
Bonilla St. C	5.4	9.1	5.2	6.6	5.4	6.4	6.3	3.2
Bonilla St. D	5.2	8.0	6.1	1.8	5.7	6.5	7.6	4.9
Bonilla St. E	7.3	4.5	5.4	6.6	5.4	6.7	7.4	2.0
Curtis-1		2.8	2.6	4.2	3.0	3.9	5.3	2.0
Curtis-2	4.3	4.5	2.6	4.5	2.6	3.2	4.7	1.5
Curtis-3		3.7	2.3	4.3	5.5	2.5	11.4	1.9
Curtis St. A	6.6	4.3	2.3	6.0	2.3	6.2	7.5	1.1
Curtis St. B	4.0	3.5	2.7	1.5	4.3	1.2	3.8	2.3
Curtis St. C	4.0	3.7	1.9	4.4	1.5	2.3	4.9	3.2
Kennedy-1	4.4	2.4	2.9	1.7	2.2	2.5	4.9	4.2
Kennedy-2	3.9	3.1	3.0	2.6	2.2	1.8	2.4	2.7
Kennedy St. A	4.4	2.0	1.4	3.0	0.9	0.9	2.0	6.3
Kennedy St. B	2.7	2.7	2.1	1.7	1.3	1.6	2.0	2.5
Kennedy St. C	5.9	3.2	2.5	2.9	0.6	2.3	3.1	3.3
Long-1	7.2	3.0	3.0	3.3	2.8	1.5	1.2	
Long-2	5.9	3.5	2.7	3.5	2.6	2.0	2.2	
Long-3	5.3	3.0	3.0	5.2	2.6	1.7	1.9	
Long St. A	5.3	5.1	2.2	1.4	1.9	0.7	2.0	
Long St. B		4.1	1.6		1.5	1.2	2.3	
Long St. C	8.4	3.2		3.8	3.7	1.0	1.7	

Table 17. Monthly values of mean epilimnetic particulate carbon ($\mu g\ C \cdot L^{-1}$) for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-1	164	210	367					
Bonilla-2	357	210	276					
Bonilla-3	187	188	428					
Bonilla St. A	359	245	303					
Bonilla St. B	270	235	497					
Bonilla St. C	415	187	170					
Bonilla St. D	467	202	155					
Bonilla St. E	192	171	365					
Curtis-1		175	322					
Curtis-2	78	245	376					
Curtis-3			340					
Curtis St. A	101	216	223					
Curtis St. B	108	149	149					
Curtis St. C	64	224	345					
Great Central-1	146	244	268	234				
Great Central-2	145	306	213	267				
Henderson	93	113	227	313				
Hobiton	174	204	230	243				
Kennedy-1	94	167	338					
Kennedy-2	98	155	160					
Kennedy St. A	58	107	68					
Kennedy St. B	112	73	114					
Kennedy St. C	120	156	285					
Long-1	192	157	186	242				
Long-2	154	146	215	232				
Long-3	150	132	202	220				
Long St. A	81	90	116	83				
Long St. B	72	86	61	95				
Long St. C	246	141	165	246				
Sproat-1	128	167	203					
Sproat-2	136	163	145					
Sproat-3	223	166	130					
Sproat-4	170	154	125					

Table 18. Monthly values of mean epilimnetic dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$) for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	93				135			
Bonilla-1	123	197	124	153	124	118	170	148
Bonilla-2	117	178	139	151	141	112	157	126
Bonilla-3	135	163	143	162	135	175	134	150
Bonilla St. A	191	262	251	192	227	268	211	231
Bonilla St. B	104	292	173	196	236	261	194	176
Bonilla St. C	121	169	172	145	137		150	147
Bonilla St. D	130	244	151	95	118	117	162	145
Bonilla St. E	101	152	151	112	118	180	142	143
Curtis-1		227	112	94	134	142	151	134
Curtis-2	123	152	97	94	115	129	154	126
Curtis-3		129	87	101	102	133	126	120
Curtis St. A	116	100	129	142	137	197	176	120
Curtis St. B	101	144	82	130	93	94	143	108
Curtis St. C	105	108	70	88	93	81	111	98
Eden	111				174			
Great Central-1	103	75	82	117	71	59	135	131
Great Central-2	70	85	98	144	78	63	141	92
Henderson	65	85	80	125	88	88	175	98
Hobiton	88	83	96	113	82	95	129	142
Ian-1	122				202			
Ian-2	135				180			
Kennedy-1	79	65	85	116	102	168	398	157
Kennedy-2	89	88	88	135	94	97	123	82
Kennedy St. A	161	71	83	83	95	65	104	143
Kennedy St. B	71	68	122	90	73	128	112	80
Kennedy St. C	178	68	100	137	122	146	129	121
Kitlope						76		
Long-1	211	157	97	84	103	96	93	
Long-2	253	225	118	114	108	78	110	
Long-3	390	305	114	98	112	98	91	
Long St. A		91	80	92	80	88	73	
Long St. B	526	83	70	112	80	74	112	
Long St. C	61	93	101	113	123	90	76	
Lowe	75					116		
Sproat-1	64	59	91	98	71	102	89	140
Sproat-2	126	58	116	106	94	76	103	135
Sproat-3	86	61	66	105	95	84	80	114
Sproat-4	65	105	73	82	125	106	111	91

Table 19. Monthly values of mean epilimnetic ammonia (μg $N \cdot L^{-1}$) for the 1981 study lakes and streams.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	<4.0				<4.0			
Bonilla-1	4.5	<4.0	<4.0	<4.0	4.3	<4.0	10.3	8.2
Bonilla-2	<4.0	4.0	4.3	4.0	4.0	<4.0	8.3	8.5
Bonilla-3	<4.0	<4.0	4.3	<4.0	4.7	<4.0	7.3	9.8
Bonilla St. A	<4.0	<4.0	<4.0	4.0	9.0	6.0	4.0	8.0
Bonilla St. B	<4.0	<4.0	4.0	4.0	9.0	5.0	5.0	11.0
Bonilla St. C	<4.0	<4.0	<4.0	<4.0	6.0	<4.0	26.0	7.0
Bonilla St. D	<4.0	<4.0	<4.0	4.0	12.0	<4.0	7.0	7.0
Bonilla St. E	<4.0	<4.0	<4.0	6.0	7.0	<4.0	12.0	14.0
Curtis-1		4.2	4.3	5.7	6.0	<4.0	8.7	9.3
Curtis-2	<4.0	<4.0	4.3	<4.0	6.3	<4.0	4.3	11.2
Curtis-3		<4.0	4.3	4.0	7.7	<4.0	<4.0	12.0
Curtis St. A	<4.0	<4.0	<4.0	5.0	7.0	<4.0	<4.0	4.0
Curtis St. B	<4.0	<4.0	<4.0	<4.0	5.0	<4.0	-	6.0
Curtis St. C	<4.0	<4.0	5.0	<4.0	4.0	6.0	4.0	15.0
Eden	<4.0				6.3			
Great Central-1	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Great Central-2	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Henderson	<4.0	<4.0	<4.0	<4.0	5.7	4.7	<4.0	4.7
Hobiton	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.3
Ian-1	<4.0				<4.0			
Ian-2	<4.0				4.0			
Kennedy-1	<4.0	<4.0	<4.0	4.5	<4.0	<4.0	16.7	8.3
Kennedy-2	<4.0	<4.0	<4.0	<4.0	4.7	4.0	5.3	4.3
Kennedy St. A	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	10.0	<4.0
Kennedy St. B	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	<4.0	10.0
Kennedy St. C	<4.0	<4.0	<4.0	<4.0	16.0	<4.0	<4.0	7.0
Kitlope						<4.0		
Long-1	<4.0	<4.0	<4.0	<4.0	<4.0	8.0	4.3	
Long-2	<4.0	<4.0	<4.0	<4.0	<4.0	5.0	4.3	
Long-3	<4.0	<4.0	<4.0	<4.0	4.3	<4.0	8.0	
Long St. A	12.0	8.0	<4.0	<4.0	4.0	4.0	<4.0	
Long St. B	<4.0	<4.0	<4.0	<4.0	7.0	<4.0	<4.0	
Long St. C	6.0	<4.0	<4.0	<4.0	4.0	5.0	<4.0	
Lowe	<4.0					<4.0		
Sproat-1	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	5.3	4.5
Sproat-2	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.0	4.7
Sproat-3	<4.0	<4.0	<4.0	<4.0	4.7	<4.0	<4.0	<4.0
Sproat-4	<4.0	4.0	<4.0	<4.0	5.7	<4.0	<4.0	5.7

[a] the "less than" sign indicates that all samples in the epilimnion are below detection limits.

Table 20. Monthly values of mean epilimnetic nitrate ($\mu g\ N \cdot L^{-1}$) for the 1981 study lakes and streams.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	45.5				<1.0			
Bonilla-1	12.8	13.2	3.3	<1.0	1.3	1.7	6.0	8.0
Bonilla-2	11.8	14.0	3.3	<1.0	<1.0	2.0	5.0	8.2
Bonilla-3	12.0	15.5	<1.0	1.3	1.0	2.7	4.7	8.2
Bonilla St. A	1.0	3.0	13.0	<1.0	2.0	4.0	4.0	3.0
Bonilla St. B	2.0	<1.0	2.0	<1.0	1.0	3.0	2.0	2.0
Bonilla St. C	1.0	<1.0	<1.0	<1.0	<1.0	3.0	9.0	2.0
Bonilla St. D	1.0	<1.0	<1.0	<1.0	16.0	2.0	3.0	2.0
Bonilla St. E	12.0	13.0	<1.0	<1.0	<1.0	2.0	4.0	8.0
Curtis-1		32.2	1.7	3.3	<1.0	4.3	9.0	15.3
Curtis-2	28.2	32.8	7.0	6.0	<1.0	6.3	9.0	18.2
Curtis-3		30.8	6.0	2.7	<1.0	5.0	9.7	19.5
Curtis St. A	5.0	15.0	1.0	<1.0	12.0	3.0	6.0	6.0
Curtis St. B	19.0	26.0	11.0	8.0	<1.0	7.0	18.0	15.0
Curtis St. C	28.0	29.0	<1.0	<1.0	<1.0	2.0	10.0	18.0
Eden	67.5				27.3			
Great Central-1	23.5	13.5	2.0	1.0	1.3	<1.0	1.7	<1.0
Great Central-2	23.0	22.0	1.7	1.3	1.7	<1.0	1.0	<1.0
Henderson	27.2	27.8	19.7	2.0	<1.0	<1.0	2.3	19.5
Hobiton	26.8	16.0	10.0	3.0	<1.0	<1.0	1.3	<1.0
Ian-1	40.2				22.3			
Ian-2	45.0				22.0			
Kennedy-1	40.3	33.2	7.3	1.0	1.0	6.0	16.7	44.0
Kennedy-2	33.8	26.8	23.0	15.0	5.3	<1.0	3.7	18.7
Kennedy St. A	30.0	44.0	32.0	25.0	27.0	3.0	66.0	64.0
Kennedy St. B	29.0	21.0	20.0	16.0	20.0	22.0	57.0	61.0
Kennedy St. C	30.0	29.0	18.0	9.0	6.0	<1.0	3.0	23.0
Kitlope						3.7		
Long-1	70.0	59.8	47.5	18.3	7.3	<1.0	1.3	
Long-2	65.2	58.5	48.2	26.0	16.3	<1.0	3.3	
Long-3	63.0	60.2	50.0	37.5	21.7	1.0	5.3	
Long St. A	51.0	39.0	28.0	16.0	7.0	4.0	19.0	
Long St. B	80.0	76.0	32.0	33.0	29.0	72.0	94.0	
Long St. C	66.0	60.0	53.0	27.0	21.0	2.0	2.0	
Lowe	21.5					3.0		
Sproat-1	13.3	12.0	3.0	1.0	1.0	<1.0	1.7	<1.0
Sproat-2	14.0	4.7	1.3	1.3	1.0	<1.0	2.3	<1.0
Sproat-3	8.0	1.7	2.3	1.3	1.0	<1.0	1.3	<1.0
Sproat-4	13.0	5.2	1.0	1.7	1.0	<1.0	3.0	<1.0

[a] the "less than" sign indicates that all samples in the epilimnion are below detection limits.

Table 21. Monthly values of mean epilimnetic particulate nitrogen (μg $N \cdot L^{-1}$) for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-1	27	22	72					
Bonilla-2	52	23	55					
Bonilla-3	22	31	77					
Bonilla St. A	31	32	46					
Bonilla St. B	20	44	77					
Bonilla St. C	10	24	30					
Bonilla St. D	9	32	42					
Bonilla St. E	32	21	74					
Curtis-1		30	58					
Curtis-2	10	28	62					
Curtis-3			65					
Curtis St. A	11	24	34					
Curtis St. B	9	15	24					
Curtis St. C	13	36	68					
Great Central-1	29	35	41	44				
Great Central-2	21	24	30	47				
Henderson	15	24	33	62				
Hobiton	26	32	35	43				
Kennedy-1	16	25	58					
Kennedy-2	14	24	23					
Kennedy St. A	5	29	12					
Kennedy St. B	7	12	22					
Kennedy St. C	15	17	29					
Long-1	18	24	35	35				
Long-2	16	24	35	32				
Long-3	16	18	34	26				
Long St. A	9	6	16	7				
Long St. B	5	6	4	6				
Long St. C	27	18	28	26				
Sproat-1	33	21	19					
Sproat-2	26	24	26					
Sproat-3	54	27	26					
Sproat-4	50	24	23					

Table 22. Monthly values of mean epilimnetic total phosphorus (μg P·L^{-1}) for the 1981 study lakes and streams.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	4.0				3.0			
Bonilla-1	2.8	3.8	6.0	7.0	10.7	9.7	7.7	4.2
Bonilla-2	2.2	3.8	5.3	7.3	10.3	9.3	6.3	3.8
Bonilla-3	3.0	4.2	6.0	7.7	7.3	8.3	7.3	3.8
Bonilla St. A	2.0	3.0	3.0	3.0	5.0	4.0	3.0	6.0
Bonilla St. B	2.0	3.0	4.0	3.0	5.0	4.0	4.0	4.0
Bonilla St. C	2.0	2.0	1.0	1.0	7.0	6.0	4.0	4.0
Bonilla St. D	2.0	2.0	<1.0	1.0	6.0	3.0	2.0	4.0
Bonilla St. E	4.0	5.0	3.0	7.0	1.0	8.0	6.0	2.0
Curtis-1		3.2	3.0	5.3	12.3	8.0	5.3	3.0
Curtis-2	2.0	4.5	5.3	6.3	9.3	7.0	5.7	2.5
Curtis-3		3.5	5.0	5.3	6.3	6.0	5.7	1.5
Curtis St. A	1.0	3.0	2.0	2.0	4.0	2.0	3.0	2.0
Curtis St. B	2.0	2.0	1.0	1.0	3.0	4.0	8.0	2.0
Curtis St. C	2.0	3.0	4.0	4.0	15.0	3.0	6.0	4.0
Eden	3.2				4.7			
Great Central-1	1.0	1.8	1.3	1.0	1.0	1.0	2.3	2.7
Great Central-2	1.2	1.5	2.0	1.0	2.0	1.7	3.7	2.7
Henderson	1.2	2.8	5.7	3.0	3.7	3.3	5.0	2.8
Hobiton	2.0	3.0	5.7	2.7	3.0	2.3	5.0	3.3
Ian-1	2.8				1.3			
Ian-2	4.0				2.0			
Kennedy-1	2.0	2.0	3.0	4.0	6.0	6.0	11.0	5.0
Kennedy-2	1.8	1.5	1.0	1.7	≤1.0	1.0	2.0	2.3
Kennedy St. A	<1.0	2.0	<1.0	<1.0	<1.0	<1.0	2.0	1.0
Kennedy St. B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	2.0
Kennedy St. C	1.0	1.0	<1.0	2.0	2.0	1.0	3.0	2.0
Kitlope						5.0		
Long-1	3.0	2.2	2.8	1.3	2.0	1.0	2.0	
Long-2	2.0	1.5	2.8	1.2	1.0	<1.0	1.3	
Long-3	2.5	1.8	3.2	2.0	1.0	1.0	1.0	
Long St. A	2.0	1.0	1.0	2.0	6.0	14.0		
Long St. B	<1.0	2.0	<1.0	<1.0	<1.0	1.0	7.0	
Long St. C	2.0	2.0	2.0	<1.0	1.0	1.0	<1.0	
Lowe	1.8					6.0		
Sproat-1	1.0	1.0	1.0	<1.0	<1.0	<1.0	1.3	1.3
Sproat-2	1.3	1.3	1.3	<1.0	<1.0	1.0	1.0	2.0
Sproat-3	1.3	1.0	1.0	<1.0	<1.0	<1.0	<1.0	1.0
Sproat-4	1.2	1.2	1.3	<1.0	<1.0	<1.0	1.0	1.7

[a] the "less than" sign indicates that all samples in the epilimnion are below detection limits.

Table 23. Monthly values of mean epilimnetic total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$) for the 1981 study lakes and streams.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	2.8				1.5			
Bonilla-1	2.0	1.2	1.7	4.7	2.3	2.3	3.7	
Bonilla-2	1.8	1.5	2.0	4.7	2.3	3.0	2.3	
Bonilla-3	1.8	2.0	2.0	5.3	1.7	3.7	2.3	
Bonilla St. A	1.0	2.0	2.0	3.0	1.0	3.0	2.0	3.0
Bonilla St. B	1.0	2.0	2.0	4.0	3.0	2.0	3.0	3.0
Bonilla St. C	1.0	2.0	1.0	3.0	2.0	3.0	3.0	2.0
Bonilla St. D	<1.0	2.0	<1.0	2.0	<1.0	2.0	2.0	2.0
Bonilla St. E	1.0	2.0	1.0	3.0	<1.0	3.0	3.0	2.0
Curtis-1		2.2	1.7	3.3	3.0	2.7	2.7	
Curtis-2	1.8	2.5	4.3	4.7	3.3	3.0	3.0	
Curtis-3		2.5	2.7	3.3	2.3	2.0	2.3	
Curtis St. A	<1.0	1.0	2.0	3.0	<1.0	1.0	2.0	
Curtis St. B	<1.0	1.0	2.0	2.0	2.0	2.0	6.0	
Curtis St. C	<1.0	3.0	<1.0	3.0	1.0	2.0	3.0	
Eden	3.0				2.3			
Great Central-1	1.0	<1.0	1.3	<1.0	1.0	1.0	1.3	<1.0
Great Central-2	1.0	2.5	1.7	<1.0	1.0	<1.0	1.7	<1.0
Henderson	1.5	2.0	2.7	2.0	2.7	2.7	2.3	1.0
Hobiton	2.0	3.0	2.7	3.0	1.3	2.3	2.0	1.3
Ian-1	2.2				1.0			
Ian-2	3.0				1.7			
Kennedy-1	1.7	1.8	2.0	<1.0	1.3	1.0	5.3	2.3
Kennedy-2	2.0	1.8	1.0	1.0	<1.0	<1.0	1.0	1.0
Kennedy St. A	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Kennedy St. B	<1.0	1.0	1.0	2.0	<1.0	<1.0	1.0	<1.0
Kennedy St. C	1.0	2.0	1.0	<1.0	<1.0	<1.0	1.0	<1.0
Long-1	1.0	1.0	1.0	<1.0	1.0	<1.0	1.0	
Long-2	1.0	1.0	1.0	<1.0	<1.0	<1.0	1.0	
Long-3	1.2	1.0	1.0	1.2	<1.0	1.0	<1.0	
Long St. A	<1.0	1.0	1.0	<1.0	<1.0	2.0	4.0	
Long St. B	<1.0	1.0	<1.0	<1.0	<1.0	1.0	2.0	
Long St. C	<1.0	2.0	<1.0	<1.0	<1.0	1.0	<1.0	
Lowe	1.0							
Sproat-1	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	1.0	<1.0
Sproat-2	1.0	1.3	1.0	<1.0	1.0	<1.0	1.3	<1.0
Sproat-3	1.3	1.3	1.0	<1.0	1.0	<1.0	1.0	1.0
Sproat-4	1.0	1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0

[a] the "less than" sign indicates that all samples in the epilimnion are below detection limits.

Table 24. Monthly values of mean epilimnetic particulate phosphorus ($\mu g\ P \cdot L^{-1}$) for the 1981 study lakes and streams.[a,b]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-1	1.5	2.0	7.3	5.7	6.0	6.0	3.7	3.8
Bonilla-2	1.5	2.0	5.0	5.7	8.0	5.3	3.0	3.2
Bonilla-3	1.8	2.2	6.3	5.3	6.0	5.0	3.7	3.0
Bonilla St. A	1.0	<1.0		1.0	<2.0	<2.0	<1.0	3.0
Bonilla St. B	<1.0	2.0		1.0	<2.0	4.0	1.0	3.0
Bonilla St. C	<1.0	<1.0		<1.0	4.0	4.0	1.0	2.0
Bonilla St. D	<1.0	<1.0		<1.0	4.0	<2.0	<1.0	2.0
Bonilla St. E	<1.0	2.0		5.0	<2.0	6.0	4.0	2.0
Curtis-1		1.5	3.7	4.3	8.7	5.0	2.0	2.7
Curtis-2	1.0	2.2	6.7	5.3	9.0	5.0	2.0	2.5
Curtis-3		1.8	6.3	4.7	7.0	3.7	3.0	3.0
Curtis St. A	<1.0	1.0	2.0	4.0	<1.0	<1.0	1.0	2.0
Curtis St. B	1.0	1.0	<2.0	<1.0	9.0	3.0	4.0	
Curtis St. C	2.0	2.0	2.0	3.0	2.0	4.0	3.0	2.0
Great Central-1		<2.0	1.0	<1.0	1.0	<2.0	2.3	1.3
Great Central-2		<2.0	1.0	1.0	1.3	2.0	2.7	1.0
Henderson		2.0	4.0	1.0	2.3	3.7	3.7	1.2
Hobiton		<2.0	5.0	1.0	2.3	2.3	3.3	1.7
Kennedy-1	1.3	1.0	5.3	<1.0	3.0	5.0	9.3	1.3
Kennedy-2	1.3	2.0	2.0	<1.0	1.0	<2.0	2.3	1.0
Kennedy St. A	<1.0	<2.0	1.0	<1.0	<1.0	<2.0	2.0	<1.0
Kennedy St. B	<1.0	<2.0	1.0	<1.0	<1.0	<2.0	2.0	<1.0
Kennedy St. C	<1.0	<2.0	2.0	<1.0	<1.0	<2.0	3.0	1.0
Kitlope						3.7		
Long-1	1.0	1.5	2.2	<1.0	1.3	2.0	1.7	
Long-2	1.0	1.0	2.0	<1.0	1.0	<2.0	1.7	
Long-3	1.2	1.0	2.8	1.0	<1.0	<2.0	1.3	
Long St. A	<1.0	<1.0	2.0	<1.0	1.0	8.0		
Long St. B	<1.0	<1.0	2.0	<1.0	<1.0	<2.0	5.0	
Long St. C	<1.0	2.0	2.0	<1.0	<1.0	<2.0	1.0	
Lowe						1.7		
Sproat-1		<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sproat-2		1.0	1.7	<1.0	<1.0	<1.0	1.0	<1.0
Sproat-3		<1.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sproat-4		<1.0	2.0	<1.0	<1.0	<1.0	<1.0	<1.0

[a] the "less than" sign indicates that all samples in the epilimnion are below detection limits.

[b] detection limits for particulate phosphorus were either 1 or 2 $\mu g\ P \cdot L^{-1}$ due to sample volume changes.

Table 25. Monthly values of mean epilimnetic soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$) for the 1981 study lakes and streams.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	1748				1870			
Bonilla-1	500	458	343	<10	<10	200	320	422
Bonilla-2	498	450	317	<10	<10	170	310	392
Bonilla-3	500	453	290	<10	<10	153	290	380
Bonilla St. A	550	590	460	670	930	1040	1190	870
Bonilla St. B	420	390	330	510	390	770	700	780
Bonilla St. C	770	430	1140	1240	2210	960	1760	810
Bonilla St. D	870	480	1070	1260	2540	1880	1630	910
Bonilla St. E	500	460	280	<10	<10	140	340	390
Curtis-1		400	367	363	48	380	490	500
Curtis-2	433	400	340	333	57	313	450	485
Curtis-3		400	337	323	67	310	430	462
Curtis St. A	480	420	460	630	710	860	910	870
Curtis St. B	390	400	380	440	30	550	570	870
Curtis St. C	430	400	330	290	90	250	440	480
Eden	1985				2033			
Great Central-1	943	860	830	657	470	500	503	520
Great Central-2	910	887	847	673	440	480	460	517
Henderson	560	500	500	337	<10	50	40	322
Hobiton	1120	1073	1080	1007	1073	963	860	1033
Ian-1	1633				1673			
Ian-2	1545				1573			
Kennedy-1	820	740	670	480	77	30	217	600
Kennedy-2	740	657	713	725	697	710	680	740
Kennedy St. A	1020	910	1020	930	1100	1300	1200	1010
Kennedy St. B	1010	870	910	840	1100	1200	1150	1240
Kennedy St. C	790	720	710	720	610	550	620	690
Kitlope						467		
Long-1	978	955	940	770	673	480	600	
Long-2	933	853	883	858	723	657	617	
Long-3	928	863	883	865	763	673	610	
Long St. A	1800	1540	1000	870	620	330	480	
Long St. B	1570	1360	840	910	870	1140	1340	
Long St. C	940	860	890	880	770	680	610	
Lowe	418					493		
Sproat-1	1143	1140	1147	1147	1120	1093	1092	1110
Sproat-2	1190	1130	1130	1130	1097	1100	1063	1123
Sproat-3	1203	1143	1150	1173	1120	1140	1077	1127
Sproat-4	1145	1097	1133	1133	1103	1130	1717	1123

[a] the "less than" sign indicates that all samples in the epilimnion are below detection limits.

Table 26. Monthly values of mean epilimnetic total dissolved solids ($mg \cdot L^{-1}$) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-1				16.4		20.0		
Bonilla-2		16.4		15.8	17.5	18.0	18.2	22.5
Bonilla-3		21.4						
Curtis-1		13.2						
Curtis-2		14.1		11.6	18.1	28.2	18.1	
Curtis-3		13.8						
Kennedy-1	22.7		18.6	27.0	26.2		33.8	22.5
Kennedy-2	16.8		19.1	23.9	19.7		29.6	21.7
Long-1	12.8							
Long-2	14.5		24.6	15.1	14.7	19.3	15.1	
Long-3	10.3							
Sproat-1						40.5		
Sproat-3						39.5		

Table 27. Monthly values of mean (0-10 m) bacteria numbers ($x10^6 \cdot mL^{-1}$) for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-1	1.19	1.07	1.16	1.31	1.71	3.23	1.47	1.64
Bonilla-2	1.14	1.10	1.07	2.37	1.45	2.22	1.50	1.36
Bonilla-3	1.29	1.10	1.13	2.14	1.71	2.95	1.74	1.40
Bonilla St. A	0.85	0.86	1.01	0.80	1.51	0.99	0.29	0.55
Bonilla St. B	0.98	0.86	0.98	0.52	1.52	0.75	1.02	1.01
Bonilla St. C	0.37	0.63	0.33	0.35	0.96	2.11	0.60	0.49
Bonilla St. D	0.37	0.58	0.30	0.35	0.63	0.30	0.30	0.34
Bonilla St. E	1.25	1.13	0.91	2.39	1.38	2.07	0.93	0.98
Curtis-1		1.04	1.09	1.27	1.43	2.08	1.68	1.57
Curtis-2	0.88	1.01	1.01	1.30	1.17	2.04	1.62	1.54
Curtis-3		0.95	0.92	1.28	1.36	1.63	1.50	1.07
Curtis St. A	0.89	0.55	0.74	0.40	0.36	1.18	1.19	0.96
Curtis St. B	0.80	0.55	0.51	0.44	1.76	0.86	0.92	0.92
Curtis St. C	1.04	1.19	0.98	0.87	1.58	2.14	2.26	1.37
Great Central-1	0.76	0.33	0.67	0.76	0.91	0.82	1.57	1.10
Great Central-2	0.74	0.45	0.73	0.80	0.93	0.77	1.86	1.48
Henderson	1.06	0.80	0.98	1.53	2.33	1.54	1.47	1.63
Hobiton	1.14	0.70	1.31	1.47	0.69	1.18	2.14	1.40
Kennedy-1	0.77	0.89	0.86	1.71	1.36	1.49	3.03	1.78
Kennedy-2	1.14	0.97	0.54	0.67	0.59	0.45	0.92	0.76
Kennedy St. A	0.42	0.46	0.31	0.58	0.25	0.30	0.60	0.89
Kennedy St. B	0.40	0.30	0.31	0.54	0.50	0.79	0.75	0.67
Kennedy St. C	1.01	1.01	0.70	0.92	0.76	0.85	1.67	1.17
Long-1	0.76	1.20	0.65	0.67	0.73	0.61	0.76	
Long-2	0.77	0.95	0.58	0.58	0.67	0.47	0.67	
Long-3	0.83	1.09	0.67	0.61	0.56	0.41	0.39	
Long St. A	0.25	0.31	0.13	0.34	0.23	0.26	0.45	
Long St. B	0.18	0.19	0.15	0.13	0.16	0.14	0.50	
Long St. C	0.71	0.82	0.48	0.65	0.34	0.32	0.33	
Sproat-1	0.86	0.58	0.57	0.34	0.35	0.22	0.54	0.67
Sproat-2	0.66	0.54	0.61	0.57	0.35	0.54	0.39	0.95
Sproat-3	0.84	0.57	0.62	0.45	0.40	0.25	0.67	0.80
Sproat-4	0.68	0.54	0.51	0.55	0.38	0.20	0.50	0.80

Table 28. Monthly values of mean (0-10 m) light and dark glucose turnover times (h) for the 1981 study lakes.[a]

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-2	75[b]	33	19	30	27	45	109
	192[c]	85	57	76	39	57	144
Curtis-2	95	38	26	23	31	46	78
	119	84	40	20	23	56	68
Kennedy-1	372	143	26	38	133	311	58
	387	342		1155	897	420	76
Kennedy-2	388	1716	200	468	424	174	393
	384			323	1716	95	170
Long-2	596	567	60	136	298	248	
	1184	865		164		1248	

[a] means are calculated using the geometric mean (log_{10}).
[b] light bottle values
[c] dark bottle values

Table 29. Monthly values of mean epilimnetic total chlorophyll ($\mu g \cdot L^{-1}$) for the 1981 study lakes.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	0.57				1.74			
Bonilla-1	0.30	0.16	5.78	7.13	10.43	10.37	2.37	4.66
Bonilla-2	0.35	0.26	7.90	5.35	9.19	10.04	3.00	3.26
Bonilla-3	0.41	0.67	8.72	6.44	5.10	8.90	4.13	3.06
Curtis-1		0.47	3.22	4.36	10.33	2.79	2.80	2.64
Curtis-2	0.28	0.73	3.74	4.86	7.84	3.05	3.27	1.44
Curtis-3		0.83	4.00	5.75	4.15	2.75	3.44	1.35
Eden	0.46				1.25			
Great Central-1	1.04	3.40	1.14	0.99	1.05	0.59	1.04	3.02
Great Central-2	0.96	1.62	1.41	1.80	1.83	0.93	1.79	1.99
Henderson	0.45	0.86	2.35	4.37	3.55	3.33	7.31	2.22
Hobiton	1.67	3.23	1.82	1.87	3.00	2.47	3.43	3.16
Ian-1	0.35				1.51			
Ian-2	0.15				1.52			
Kennedy-1	1.16	2.94	4.45	3.82	3.81	11.95	39.90	4.67
Kennedy-2	0.71	1.69	1.48	1.62	1.32	1.11	1.92	1.75
Kitlope						1.40		
Long-1	<0.12	0.49	2.22	1.50	2.05	2.28	3.72	
Long-2	0.18	0.34	2.59	1.64	1.51	1.78	3.48	
Long-3	0.41	0.60	1.67	1.69	1.37	1.82	2.59	
Lowe	0.66					1.79		
Sproat-1	0.86	1.80	0.71	0.44	0.55	0.54	0.57	0.99
Sproat-2	1.08	1.60	0.62	0.54	0.57	0.75	0.63	1.57
Sproat-3	1.42	1.25	0.60	0.53	0.60	0.37	0.60	1.25
Sproat-4	1.01	1.49	0.57	0.45	0.47	0.43	0.56	1.52

[a] the "less than" sign indicates that all samples in the epilimnion are below detection limits.

Table 30. Monthly values of mean (1,3,&5 m) total algal numbers ($x10^8 \cdot m^{-3}$) for the 1981 study lakes.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	7				65			
Bonilla-1	13	15	174	163	246	206	92	118
Bonilla-2	19	13	190	143	245	193	87	112
Bonilla-3	22	17	198	141	120	168	129	112
Curtis-1		10	32	205	272	96	105	49
Curtis-2	3	15	41	233	264	184	106	41
Curtis-3		15	46	291	244	188	108	46
Eden	3				6			
Great Central-1	375	206	526	76	65	88	570	500
Great Central-2	276	175	606	137	74	255	683	598
Henderson	14	9	114	684	312	95	136	478
Hobiton	36	98	340	530	536	522	297	554
Ian-1	2				13			
Ian-2	4				13			
Kennedy-1	13	17	174	286	272	1888	321	55
Kennedy-2	95	125	214	266	136	93	410	268
Kitlope						11		
Long-1 [b]	6	4	20	20	18	19	14	
Long-2 [b]	3	4	28	15	14	21	10	
Long-3 [b]	5	4	19	16	14	23	7	
Lowe	3[b]					330		
Sproat-1	323	201	260	279	170	176	194	567
Sproat-2	359	290	300	203	216	147	103	549
Sproat-3	326	346	271	244	329	154	239	501
Sproat-4	359	311	230	215	192	196	87	568

[a] values include ultraphytoplankton
[b] values do not include ultraphytoplankton

Table 31. Monthly values of mean (1,3,65 m) total algal volume ($mm^3 \cdot m^{-3}$) for the 1981 study lakes.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	40				357			
Bonilla-1	55	60	3652	2660	1402	2048	456	652
Bonilla-2	51	67	5757	2445	1127	2244	487	512
Bonilla-3	52	110	5212	2427	667	2103	472	478
Curtis-1		60	924	2567	4937	846	247	174
Curtis-2	26	94	1274	5354	4647	1044	236	202
Curtis-3		112	1268	4471	5070	1504	289	204
Eden	28				127			
Great Central-1	468	1908	4674	5897	3455	133	353	681
Great Central-2	381	665	4680	6163	4562	139	580	837
Henderson	61	47	666	2856	2340	285	756	605
Hobiton	124	204	460	325	3127	657	1813	691
Ian-1	29				448			
Ian-2	13				445			
Kennedy-1	80	292	3550	1238	2816	2204	1515	277
Kennedy-2	107	99	318	763	727	285	352	369
Kitlope						194		
Long-1 [b]	42	55	651	590	506	1264	320	
Long-2 [b]	59	61	797	463	366	1412	590	
Long-3 [b]	93	186	712	394	468	1859	200	
Lowe	20[b]					176		
Sproat-1	112	203	436	419	318	125	150	230
Sproat-2	128	200	299	592	335	140	121	292
Sproat-3	194	237	288	663	366	120	152	241
Sproat-4	107	172	277	607	314	185	147	306

[a] values include ultraphytoplankton
[b] values do not include ultraphytoplankton

Table 32. Monthly values of mean (1,3,&5 m) total algal carbon (mg C·m^{-3}) for the 1981 study lakes.[a]

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	7				68			
Bonilla-1	7	9	300	233	157	334	58	66
Bonilla-2	8	10	453	215	117	354	61	51
Bonilla-3	8	16	414	211	69	333	61	47
Curtis-1		11	97	227	421	84	32	21
Curtis-2	4	16	136	463	397	96	31	22
Curtis-3		19	143	430	413	135	38	22
Eden	4				17			
Great Central-1	46	176	366	422	253	17	38	72
Great Central-2	38	60	378	444	334	20	59	99
Henderson	9	6	72	187	174	47	78	82
Hobiton	13	24	51	41	405	81	211	75
Ian-1	4				44			
Ian-2	3				36			
Kennedy-1	10	29	304	111	259	303	310	55
Kennedy-2	13	15	47	93	92	34	43	43
Kitlope						23		
Long-1[b]	6	6	50	47	55	116	32	
Long-2[b]	6	6	67	40	40	109	44	
Long-3[b]	8	13	52	39	48	151	21	
Lowe	3[b]					37		
Sproat-1	18	26	49	37	34	18	25	36
Sproat-2	21	29	37	52	44	20	19	44
Sproat-3	24	32	36	55	49	17	27	38
Sproat-4	16	25	32	50	39	24	21	42

[a] values include ultraphytoplankton
[b] values do not include ultraphytoplankton

Table 33. Monthly values of mean (1,3,&5 m) nanoplankton (max.dim. 20µ) numbers ($x10^8.m^{-3}$) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	7				64			
Bonilla-1	13	8	133	121	229	149	85	107
Bonilla-2	19	13	129	104	231	136	81	88
Bonilla-3	22	17	143	101	111	109	121	105
Curtis-1		10	18	176	211	87	101	46
Curtis-2	3	15	22	175	206	172	103	38
Curtis-3		15	26	241	180	170	105	43
Eden	3				5			
Great Central-1	371	189	483	22	32	87	568	493
Great Central-2	273	169	562	79	32	254	678	591
Henderson	13	9	111	667	292	71	134	473
Hobiton	35	96	338	528	512	519	283	549
Ian-1	1				11			
Ian-2	4				11			
Kennedy-1	12	15	137	273	224	1722	24	6
Kennedy-2	94	125	212	260	131	91	408	266
Kitlope						10		
Long-1[a]	6	3	19	18	15	9	12	
Long-2[a]	3	4	27	12	13	12	7	
Long-3[a]	4	4	18	13	11	9	5	
Lowe	3[a]					330		
Sproat-1	323	200	258	277	168	175	194	566
Sproat-2	357	289	298	199	214	146	102	547
Sproat-3	325	344	270	240	327	154	238	500
Sproat-4	358	310	228	211	190	195	87	567

[a]values do not include ultraphytoplankton

Table 34. Monthly values of mean (1,3,&5 m) nanoplankton (max.dim. 20µ) volume ($mm^3 \cdot m^{-3}$) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	33				341			
Bonilla-1	22	37	123	108	168	370	117	69
Bonilla-2	24	35	177	108	108	532	82	48
Bonilla-3	29	51	183	98	64	321	153	55
Curtis-1		48	83	93	182	70	39	47
Curtis-2	14	70	119	127	161	87	45	41
Curtis-3		77	130	116	127	109	71	39
Eden	14				34			
Great Central-1	71	101	99	45	33	46	70	105
Great Central-2	66	36	124	66	45	59	94	178
Henderson	35	28	341	96	90	189	111	114
Hobiton	28	65	111	68	79	214	118	119
Ian-1	13				78			
Ian-2	12				75			
Kennedy-1	32	45	287	150	181	241	23	17
Kennedy-2	32	53	150	105	72	62	127	79
Kitlope						30		
Long-1[a]	28	22	133	96	151	62	64	
Long-2[a]	17	22	202	77	110	78	40	
Long-3[a]	23	21	115	100	90	72	30	
Lowe	13[a]					150		
Sproat-1	79	52	172	68	80	37	112	110
Sproat-2	73	90	122	66	86	45	53	130
Sproat-3	68	132	137	69	105	40	84	115
Sproat-4	58	75	91	62	75	47	55	95

[a]values do not include ultraphytoplankton

Table 35. Monthly values of mean (1,3,65 m) nanoplankton (max.dim. 20 μ) carbon (mg C·m^{-3}) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	6				66			
Bonilla-1	5	8	26	23	37	67	21	15
Bonilla-2	5	7	35	23	24	81	17	11
Bonilla-3	6	10	36	21	14	56	27	12
Curtis-1		10	17	20	39	15	9	10
Curtis-2	3	14	23	27	35	19	10	8
Curtis-3		15	26	26	28	22	15	8
Eden	3				6			
Great Central-1	15	16	21	9	7	10	16	24
Great Central-2	13	7	27	13	9	13	22	40
Henderson	7	4	44	20	20	39	24	23
Hobiton	6	13	23	15	18	43	26	24
Ian-1	2				14			
Ian-2	2				13			
Kennedy-1	6	8	54	32	38	53	4	3
Kennedy-2	6	12	31	23	15	13	25	16
Kitlope						6		
Long-1[a]	6	4	25	18	24	11	12	
Long-2[a]	3	4	37	14	18	13	7	
Long-3[a]	4	4	22	16	15	12	6	
Lowe	2					33		
Sproat-1	15	8	25	13	14	8	17	22
Sproat-2	15	18	23	12	17	9	11	28
Sproat-3	13	22	23	14	22	9	19	24
Sproat-4	12	15	17	11	15	9	12	19

[a] values do not include ultraphytoplankton

Table 36. Monthly values of light intensity during the incubation period (Einsteins·m^{-2}·h^{-1}) and the total light day (Einsteins·m^{-2}·d^{-1}) for the 1981 study lakes.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-2	2.69[a]	2.61	1.24	3.04	1.70	1.90	0.26
	13.75[b]	22.01		22.05	18.97	10.03	
Curtis-2	1.83	2.39	2.11	1.93	2.59	0.66	0.61
	16.44	18.18	23.42	25.61	21.96	10.87	4.46
Kennedy-1				1.15	4.40	3.81	2.73
				14.98	27.10	27.48	
Kennedy-2				1.05	4.42	3.77	2.66
				14.98	27.10	27.48	
Long-2	1.24		1.11	1.91	4.53	1.22	
	8.56		16.84	14.82	27.62		

[a] light intensity during the incubation period (Einsteins·m^{-2}·h^{-1})
[b] light intensity during the total light day (Einsteins·m^{-2}·d^{-1})

Table 37. Monthly values of mean euphotic zone total primary production (>0.2 µm) (mg C·m^{-3}·h^{-1}) for the 1981 study lakes.[a]

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-2	0.06	4.85	2.41	12.77	10.20	2.12	0.77
Curtis-2	0.30	1.53	2.89	3.37	4.73	1.22	2.72
Great Central-2					2.57		
Kennedy-1	1.62	3.58	3.25	3.20	17.06	20.53	3.02
Kennedy-2	1.05	0.63	0.64	0.96	1.10	0.98	2.01
Long-2	0.17	0.74	1.36	0.73	0.92	0.62	
Sproat-1					2.29		

[a] values are obtained by dividing the integral primary production values (mg C·m^{-2}·h^{-1}) by the compensation depth (m).

Table 38. Monthly values of mean (1, 3 and 5 m) size fractionated primary production (mg $C \cdot m^{-3} \cdot h^{-1}$) for the 1981 study lakes.

Lake and station	Month	0.2-3.0 µm	>3.0 µm	3.0-8.0 µm	>8.0 µm
Bonilla-2	Jun	0.22	1.39	0.20	1.20
	Jul	5.32	7.45	2.74	4.71
	Aug	0.62	7.34	1.49	4.05
	Sep	0.23	0.64	0.30	0.35
	Oct	0.07	0.22	0.06	0.16
Curtis-2	Jun	0.93	2.06	0.64	1.42
	Jul	0.46	2.91	0.45	2.46
	Aug	1.87	3.01	0.83	1.51
	Sep	0.51	0.50	0.15	0.35
	Oct	0.12	0.20	0.07	0.13
Kennedy-1	Apr	1.36	0.55		
	Jun	3.23	0.44		
	Jul	0.40	2.49		
	Aug	0.47	12.65	1.21	11.43
	Sep	1.08	21.72	0.07	21.83
	Oct	0.52	1.62	0.19	1.43
Kennedy-2	Apr	0.84	0.43		
	Jun	0.37	0.48		
	Jul	0.30	0.65		
	Aug	0.19	0.99	0.43	0.69
	Sep	0.31	0.66	0.21	0.45
	Oct	0.76	0.69	0.52	0.18
Long-2	Apr	0.12	0.05		
	Jun	0.54	0.67		
	Jul	0.30	0.51		
	Aug	0.46	0.48	0.24	0.25
	Sep	0.48	0.31	0.18	0.13

Table 39. Monthly values of areal hourly primary production (mg $C \cdot m^{-2} \cdot h^{-1}$) for the 1981 study lakes.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-2	0.5	19.9	9.9	49.8	36.7	7.9	2.7
Curtis-2	1.9	11.6	18.5	21.5	23.7	6.4	2.7
Kennedy-1	15.2	21.1	22.1	24.9	90.4	145.8	14.5
Kennedy-2	8.0	4.3	5.0	8.7	10.1	10.6	11.0
Long-2	1.1	4.3	8.1	5.2	7.3	5.3	

Table 40. Monthly values of daily primary production (mg $C \cdot m^{-2} \cdot d^{-1}$) for the 1981 study lakes.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-2	3	168		356	408	41	
Curtis-2	17	89	206	286	201	106	5
Kennedy-1				312	565	1041	
Kennedy-2				124	63	76	
Long-2	8		123	41	45		

Table 41. Monthly values of primary production per unit of light (mg $C \cdot Einstein^{-1}$) for the 1981 study lakes.

Lake and station	Apr	May	Jun	Jul	Aug	Sep	Oct
Bonilla-2	0.19	7.63	7.97	16.38	21.60	4.13	10.41
Curtis-2	1.05	4.87	8.79	11.17	9.14	9.75	4.46
Kennedy-1				21.62	20.55	38.26	5.31
Kennedy-2				8.24	2.29	2.82	4.15
Long-2	0.90		7.32	2.75	1.62	4.35	

Table 42. Monthly values of volumetric zooplankton biomass (mg dry weight·m^{-3}) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	2.4				42.7			
Bonilla-1	5.2	5.5	5.2	1.9	15.8	16.8	16.2	8.0
Bonilla-2	3.9	2.8	5.3	12.5	20.5	19.8	10.0	6.4
Bonilla-3	3.4	1.1	7.6	1.2	16.0	21.5	10.0	6.8
Curtis-1		3.4	3.0	6.5	1.5	3.4	8.2	5.3
Curtis-2	5.5	2.3	2.0	8.4	1.0	1.6	5.7	9.3
Curtis-3		2.4	4.1	6.2	1.0	6.1	6.0	14.5
Eden	7.6				8.4			
Great Central-1	1.7	2.4	1.7	7.7	3.4		3.6	3.8
Great Central-2	5.2	1.8	2.7	5.2	2.1	8.5	4.1	2.4
Henderson	1.5	3.3	4.4	7.4	16.3	15.5	6.8	2.6
Hobiton	3.0	4.4	8.5	1.8	10.4	1.7	3.5	4.5
Ian-1	4.0				41.5			
Ian-2	11.5				6.8			
Kennedy-1	2.5	2.2	6.6	5.6	10.0	1.9	6.2	3.1
Kennedy-2	1.1	1.9	5.2	8.9	2.4	3.8	2.8	3.4
Kitlope						1.2		
Long-1	2.5	2.7	8.5	4.8	2.7	6.5	7.3	
Long-2	1.0	2.2	4.5	4.9	1.3	2.7	5.0	
Long-3	2.6	3.3	1.8	2.4	4.8	1.8	1.3	
Lowe	1.3					8.2		
Sproat-1	2.3	4.5	6.5	7.7	6.4	3.6	3.3	3.3
Sproat-2	2.3	5.8	5.2	4.5	2.3	3.4	1.5	1.5
Sproat-3	4.5	4.1	5.2	4.0	3.1	2.3	1.2	1.6
Sproat-4	1.9	4.8	3.3	3.6	2.8	3.0	2.4	2.9

Table 43. Monthly values of areal zooplankton biomass (mg dry weight·m^{-2}) for the 1981 study lakes.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Awun	60				1068			
Bonilla-1	130	138	130	48	395	420	405	200
Bonilla-2	98	70	132	312	512	495	250	160
Bonilla-3	85	28	190	30	400	538	250	170
Curtis-1		85	75	162	38	85	205	132
Curtis-2	138	58	50	210	25	40	142	232
Curtis-3		60	102	155	25	152	150	362
Eden	190				210			
Great Central-1	85	120	85	385	170		180	190
Great Central-2	260	90	135	260	105	425	205	120
Henderson	75	166	220	370	815	775	340	130
Hobiton	150	220	425	90	520	85	175	225
Ian-1	100				1038			
Ian-2	288				170			
Kennedy-1	125	110	330	280	500	95	310	155
Kennedy-2	55	95	260	445	120	190	140	170
Kitlope						30		
Long-1	125	135	425	240	135	325	365	
Long-2	50	110	225	245	65	135	250	
Long-3	120	165	72	96	192	72	65	
Lowe	32					205		
Sproat-1	115	225	325	385	320	180	165	165
Sproat-2	115	290	208	180	92	136	60	75
Sproat-3	225	205	260	200	155	115	60	80
Sproat-4	95	240	165	180	140	150	120	145

Table 44. Dates for the beginning and end of the growing season used to compute the time-weighted means values for the 1981 study lakes and streams.

Lake and station	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Bonilla-1			4					10	
Bonilla-2			4					11	
Bonilla-3		25						10	
Bonilla St. A		6					20		
Bonilla St. B		7					30		
Bonilla St. C			3				14		
Bonilla St. D			5				1		
Bonilla St. E		20						10	
Curtis-1			6					5	
Curtis-2			5					9	
Curtis-3			4					7	
Curtis St. A			4				30		
Curtis St. B			4					1	
Curtis St. C			3					8	
Great Central-1		4						24	
Great Central-2		9						27	
Henderson	23								15
Hobiton		2						23	
Kennedy-1	31							20	
Kennedy-2		2						21	
Kennedy St. A		8						20	
Kennedy St. B		25						13	
Kennedy St. C		6						27	
Long-1		24							15
Long-2		23							15
Long-3		23							15
Long St. A				12			27		
Long St. B				7				10	
Long St. C		27							15
Sproat-1	18							23	
Sproat-2	14							23	
Sproat-3	14							23	
Sproat-4	14							22	

Table 45. Time-weighted mean values of surface temperature (°C), mean (0-10 m) water temperature (°C), depth of maximum stability (m), mean epilimnetic buoyancy frequency ($\cdot s^{-1}$), and modified Schmidt stability function ($kg \cdot s^{-2}$) for the 1981 study lakes and streams.

Lake and station	Surface temperature (°C)	Mean (0-10 m) water temperature (°C)	Depth of maximum stability (m)	Mean epilimnetic buoyancy frequency ($\cdot s^{-1}$)	Modified Schmidt stability function ($kg \cdot s^{-2}$)
Bonilla-1	14.5	13.8	9.5	0.020	3573
Bonilla-2	14.5	13.6	10.3	0.032	3504
Bonilla-3	14.2	13.5	11.5	0.026	3314
Bonilla St. A	13.5				
Bonilla St. B	14.2				
Bonilla St. C	13.2				
Bonilla St. D	11.1				
Bonilla St. E	14.2				
Curtis-1	15.1	13.3	7.8	0.036	4585
Curtis-2	14.8	13.2	8.4	0.040	4180
Curtis-3	14.8	13.3	8.5	0.035	4688
Curtis St. A	13.3				
Curtis St. B	14.6				
Curtis St. C	14.6				
Great Central-1	16.3	15.4	10.8	0.037	4336
Great Central-2	16.3	15.4	10.5	0.031	4083
Henderson	15.1	14.6	16.6	0.028	2864
Hobiton	15.7	14.0	8.4	0.041	5234
Kennedy-1	17.8	14.4	6.6	0.043	7066
Kennedy-2	16.1	15.2	10.3	0.040	4847
Kennedy St. A	13.7				
Kennedy St. B	15.2				
Kennedy St. C	16.6				
Long-1[a]	14.0	13.2	9.6	0.025	3719
Long-2[a]	14.3	13.5	11.5	0.027	3426
Long-3[a]	14.6	13.7	9.8	0.024	4123
Long St. A	9.3				
Long St. B	10.1				
Long St. C	14.3				
Sproat-1	15.3	14.6	12.0	0.033	4150
Sproat-2	16.1	15.2	9.6	0.029	5293
Sproat-3	15.9	14.9	10.1	0.032	4331
Sproat-4	16.1	15.0	9.4	0.033	4758

[a]November 1980 values were used to calculate the time-weighted means for surface temperature (°C), mean (0-10 m) water temperature (°C) and depth of maximum stability (m).

Table 46. Time-weighted mean values of Secchi depth (m), mean extinction coefficient (k_e), compensation depth (m), and mean (2 and 7.5 m) pH for the 1981 study lakes.

Lake and station	Secchi depth (m)	Mean extinction coefficient (k_e)	Compensation depth (m)	Mean (2 and 7.5 m) pH
Bonilla-1	2.3	1.14	3.9	
Bonilla-2	2.9	1.11	3.9	
Bonilla-3	2.3	1.06	4.2	
Curtis-1	3.5	0.75	5.9	
Curtis-2	3.4	0.71	6.1	
Curtis-3	3.7	0.75	5.8	
Great Central-1	8.7	0.31	13.7	
Great Central-2	8.3	0.33	12.9	
Henderson	6.2	0.53	8.1	
Hobiton	5.9	0.55	7.5	
Kennedy-1	3.5	0.90	5.5	7.7
Kennedy-2	6.1	0.54	7.9	7.0
Long-1[a]	4.9	0.59	7.3	
Long-2[a]	5.1	0.59	7.1	6.5
Long-3[a]	5.1	0.59	7.5	
Sproat-1	11.7	0.28	14.7	
Sproat-2	11.0	0.24	17.4	
Sproat-3	12.2	0.21	18.2	
Sproat-4	11.8	0.25	17.3	

[a]November 1980 values were used to calculate the time-weighted mean values.

Table 47. Time-weighted mean values of mean (2 and 7.5 m) total alkalinity ($mg \cdot L^{-1} CaCO_3$), mean epilimnetic dissolved inorganic carbon ($mg\ C \cdot L^{-1}$), mean epilimnetic dissolved organic carbon ($mg\ C \cdot L^{-1}$), and mean epilimnetic particulate carbon ($\mu g\ C \cdot L^{-1}$) for the 1981 study lakes and streams.

Lake and station	Mean (2 and 7.5 m) total alkalinity ($mg \cdot L^{-1} CaCO_3$)	Mean epilimnetic dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)	Mean epilimnetic dissolved organic carbon ($mg\ C \cdot L^{-1}$)	Mean epilimnetic particulate carbon ($\mu g\ C \cdot L^{-1}$)
Bonilla-1			5.0	
Bonilla-2		0.44	5.4	
Bonilla-3			5.4	
Bonilla St. A			9.2	
Bonilla St. B			7.6	
Bonilla St. C			6.2	
Bonilla St. D			5.1	
Bonilla St. E			5.9	
Curtis-1			3.7	
Curtis-2		0.52	3.5	
Curtis-3			4.8	
Curtis St. A			4.6	
Curtis St. B			2.7	
Curtis St. C			3.0	
Great Central-1				
Great Central-2				
Henderson				
Hobiton				
Kennedy-1	13.6	3.93	3.0	
Kennedy-2	9.9	3.23	2.5	
Kennedy St. A			2.1	
Kennedy St. B			1.8	
Kennedy St. C			2.5	
Long-1 [a]			2.5	
Long-2 [a]	3.0	1.36	2.6	
Long-3 [a]			2.9	
Long St. A			1.3	
Long St. B			1.5	
Long St. C			2.8	
Sproat-1				
Sproat-2				
Sproat-3				
Sproat-4				

[a] November 1980 values were used to calculate the time-weighted mean values.

Table 48. Time-weighted mean values of mean epilimnetic dissolved organic nitrogen (μg $N \cdot L^{-1}$), mean epilimnetic ammonia (μg $N \cdot L^{-1}$), mean epilimnetic nitrate (μg $N \cdot L^{-1}$), and mean epilimnetic particulate nitrogen (μg $N \cdot L^{-1}$) for the 1981 study lakes and streams.[a]

Lake and station	Mean epilimnetic dissolved organic nitrogen (μg $N \cdot L^{-1}$)	Mean epilimnetic ammonia (μg $N \cdot L^{-1}$)	Mean epilimnetic nitrate (μg $N \cdot L^{-1}$)	Mean epilimnetic particulate nitrogen (μg $N \cdot L^{-1}$)
Bonilla-1	141	<5.2	3.3	
Bonilla-2	142	4.9	3.2	
Bonilla-3	151	<4.8	3.7	
Bonilla St. A	235	5.3	4.2	
Bonilla St. B	222	5.2	1.6	
Bonilla St. C	150	<5.4	<1.8	
Bonilla St. D	129	6.2	<5.3	
Bonilla St. E	141	6.4	<3.4	
Curtis-1	132	5.6	5.4	
Curtis-2	120	4.8	7.6	
Curtis-3	111	5.0	6.6	
Curtis St. A	152	<4.8	5.4	
Curtis St. B	109	<4.3	9.5	
Curtis St. C	90	4.8	<4.9	
Great Central-1	97	<4.0	1.4	
Great Central-2	103	<4.0	1.3	
Henderson	106	<4.4	11.0	
Hobiton	105	<4.0	4.6	
Kennedy-1	163	<6.7	13.8	
Kennedy-2	102	4.4	13.3	
Kennedy St. A	91	<5.0	35.9	
Kennedy St. B	102	<4.5	30.3	
Kennedy St. C	120	<6.2	11.1	
Long-1[b]	85	<5.1	17.3	
Long-2[b]	56	<4.3	21.4	
Long-3[b]	112	<4.4	23.5	
Long St. A	84	<4.0	7.9	
Long St. B	88[c]	<5.0[c]	54.1[c]	
Long St. C	103[c]	<4.2[c]	22.8[c]	
Sproat-1	88	<4.2	3.8	
Sproat-2	99	<4.0	2.6	
Sproat-3	85	<4.1	1.8	
Sproat-4	98	<4.4	2.7	

[a] If the majority of monthly values in the growing season are below detection limits, then the time-weighted mean values will include a "less than" sign.

[b] November 1980 values were used to calculate the time-weighted mean values.

[c] The end of the growing season was changed to September.

Table 49. Time-weighted mean values of mean epilimnetic total phosphorus ($\mu g\ P \cdot L^{-1}$), mean epilimnetic total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$), mean epilimnetic particulate phosphorus ($\mu g\ P \cdot L^{-1}$), and mean epilimnetic soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$) for the 1981 study lakes and streams.[a]

Lake and station	Mean epilimnetic total phosphorus ($\mu g\ P \cdot L^{-1}$)	Mean epilimnetic total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	Mean epilimnetic particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	Mean epilimnetic soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)
Bonilla-1	7.9	2.7	5.5	171
Bonilla-2	7.5	2.8	5.2	179
Bonilla-3	6.9	2.9	4.9	182
Bonilla St. A	3.5	2.1	1.4	765
Bonilla St. B	3.8	2.6	1.9	503
Bonilla St. C	3.7	2.3	2.4	1356
Bonilla St. D	2.8	1.5	2.0	1622
Bonilla St. E	4.9	2.1	3.7	195
Curtis-1	6.7	2.7	4.7	326
Curtis-2	6.6	3.4	5.4	302
Curtis-3	5.5	2.5	4.8	296
Curtis St. A	2.6	1.7	1.8	689
Curtis St. B	3.1	2.3	3.7	384
Curtis St. C	6.3	1.9	2.7	286
Great Central-1	1.5	1.1	1.5	611
Great Central-2	2.2	1.2	1.6	595
Henderson	3.7	2.2	2.7	264
Hobiton	3.6	2.2	2.6	1010
Kennedy-1	6.0	2.2	4.6	377
Kennedy-2	1.5	1.1	1.7	702
Kennedy St. A	<1.3	<1.0	<1.4	1084
Kennedy St. B	<1.3	<1.2	<1.4	1060
Kennedy St. C	1.7	<1.1	<1.8	655
Long-1[b]	1.8	1.0	1.6[c]	712
Long-2[b]	1.4	<1.0	1.5[c]	763
Long-3[b]	1.7	<1.0	1.6[c]	777
Long St. A	7.5	<2.7	<3.0	539
Long St. B	1.9[c]	<1.1[c]	<1.9[c]	1039[c]
Long St. C	1.2[c]	<1.0[c]	<1.4[c]	780[c]
Sproat-1	1.1	<1.1	<1.0	1123
Sproat-2	1.2	<1.1	<1.1	1115
Sproat-3	<1.0	<1.1	<1.0	1137
Sproat-4	1.1	<1.0	<1.2	1204

[a] If the majority of monthly values in the growing season are below detection limits, then the time-weighted mean values will include a "less than" sign.

[b] November 1980 values were used to calculate the time-weighted mean values.
[c] The end of the growing season was changed to September.

Table 50. Time-weighted mean values of mean epilimpetic total dissolved solids ($mg \cdot L^{-1}$), mean (0-10 m) bacteria numbers ($x10^6 \cdot mL^{-1}$), mean (0-10 m) light bottle glucose turnover time (h), and mean (0-10 m) dark bottle glucose turnover time (h) for the 1981 study lakes and streams.

Lake and station	Mean epilimnetic total dissolved solids ($mg \cdot L^{-1}$)	Mean (0-10 m) bacteria numbers ($x10^6 \cdot mL^{-1}$)	Mean (0-10 m) light bottle glucose turnover time (h)	Mean (0-10 m) dark bottle glucose turnover time (h)
Bonilla-1	18.2	1.75		
Bonilla-2	17.2	1.69	35	73
Bonilla-3	21.4	1.85		
Bonilla St. A		0.99		
Bonilla St. B		0.95		
Bonilla St. C		0.90		
Bonilla St. D		0.42		
Bonilla St. E		1.49		
Curtis-1	13.2	1.49		
Curtis-2	17.7	1.41	37	48
Curtis-3	13.8	1.31		
Curtis St. A		0.74		
Curtis St. B		0.90		
Curtis St. C		1.54		
Great Central-1		0.68		
Great Central-2		0.58		
Henderson		1.48		
Hobiton		1.48		
Kennedy-1	26.0	1.75	150	612
Kennedy-2	22.7	0.69	557	509
Kennedy St. A		0.46		
Kennedy St. B		0.59		
Kennedy St. C		1.02		
Long-1[a]	12.8	0.79		
Long-2[a]	18.0	0.71	307	674
Long-3[a]	10.3	0.63		
Long St. A		0.30		
Long St. B		0.24		
Long St. C		0.40		
Sproat-1		0.49		
Sproat-2		0.11		
Sproat-3		0.11		
Sproat-4		0.51		

[a]November 1980 values were used to calculate the time-weighted mean values.

Table 51. Time-weighted mean values of mean epilimnetic total chlorophyll ($\mu g \cdot L^{-1}$), mean (1,3,ε5 m) total algal numbers ($x10^8 \cdot m^{-3}$), mean (1,3,ε5 m) total algal volume ($mm^3 \cdot m^{-3}$) and mean (1,3,ε5 m) total algal carbon ($mg\ C \cdot m^{-3}$) for the 1981 study lakes.

Lake and station	Mean epilimnetic total chlorophyll ($\mu g \cdot L^{-1}$)	Mean (1,3,ε5 m) total algal numbers ($x10^8 \cdot m^{-3}$)	Mean (1,3,ε5 m) total algal volume ($mm^3 \cdot m^{-3}$)	Mean (1,3,ε5 m) total algal carbon ($mg\ C \cdot m^{-3}$)
Bonilla-1	6.92	168	1879	201
Bonilla-2	6.68	163	2164	216
Bonilla-3	6.18	135	1867	189
Curtis-1	4.60	137	1882	170
Curtis-2	4.30	158	2367	212
Curtis-3	3.76	166	2408	221
Great Central-1	1.49 > 1.565	286 325	2525 > 2620.5	197
Great Central-2	1.64	364	2716	213
Henderson	3.01	240	1078	91
Hobiton	2.69	411	1115	136
Kennedy-1	11.17	469	1824	212
Kennedy-2	1.54	218	420	53
Long-1	2.19	18[a]	691[a]	62[a]
Long-2	1.92	18[a]	722[a]	60[a]
Long-3	1.67	16[a]	781[a]	66[a]
Sproat-1	0.68	246	263	31
Sproat-2	0.78	247	269	34
Sproat-3	0.66	288	288	35
Sproat-4	0.67	244	271	32

[a]values do not include ultraphytoplankton

Table 52. Time-weighted mean values of mean (1,3,&5 m) nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$), mean (1,3,&5 m) nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$) and mean (1,3,&5 m) nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$) for the 1981 study lakes.

Lake and station	Mean (1,3,&5 m) nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	Mean (1,3,&5 m) nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	Mean (1,3,&5 m) nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)
Bonilla-1	137	169	33
Bonilla-2	130	189	34
Bonilla-3	105	147	28
Curtis-1	114	93	20
Curtis-2	129	105	22
Curtis-3	137	108	23
Great Central-1	262	68	14
Great Central-2	339	84	18
Henderson	230	140	25
Hobiton	403	112	23
Kennedy-1	372	142	29
Kennedy-2	215	95	20
Long-1	13[a]	102[a]	18[a]
Long-2	14[a]	104[a]	18[a]
Long-3	12[a]	84[a]	15[a]
Sproat-1	244	89	15
Sproat-2	245	81	16
Sproat-3	286	95	18
Sproat-4	242	69	14

[a] values do not include ultraphytoplankton

Table 53. Time-weighted mean values of light intensity during the incubation period (Einsteins·m^{-2}·h^{-1}), light intensity during the total light day (Einsteins·m^{-2}·d^{-1}) and mean euphotic zone total primary production (>0.2 μm) (mg C·m^{-3}·h^{-1}) for the 1981 study lakes.

Lake and station	Light intensity during the incubation period (Einsteins·m^{-2}·h^{-1})	Light intensity during the total light day (Einsteins·m^{-2}·d^{-1})	Mean euphotic zone total primary production (>0.2 μm) (mg C·m^{-3}·h^{-1})
Bonilla-2	2.09	18.64	6.16
Curtis-2	1.91	19.65	2.68
Kennedy-1	3.74	23.92[b]	8.48[a]
Kennedy-2	3.30	23.92[b]	1.01[a]
Long-2	2.10[c]	15.74[d]	0.80

[a]The beginning of the growing season was changed to April 9.
[b]The growing season limits are July 8 to September 11.
[c]The growing season limits are April 7 to September 9.
[d]The growing season limits are April 7 to August 11.

Table 54. Time-weighted mean values of mean (1, 3 and 5 m) size fractionated primary production (0.2-3.0 μm, >3.0 μm, 3.0-8.0 μm, and >8.0 μm), (mg C·m^{-3}·h^{-1}) for the 1981 study lakes.

Lake and station	Mean (1, 3 and 5 m) size fractionated primary production (mg C·m^{-3}·h^{-1})			
	0.2-3.0 μm	>3.0 μm	3.0-8.0 μm	>8.0 μm
Bonilla-2	1.84[a]	4.58[a]	1.32[a]	2.77[a]
Curtis-2	0.93[a]	2.13[a]	0.50[a]	1.44[a]
Kennedy-1	1.36[b]	6.71[b]	0.35[c]	13.76[c]
Kennedy-2	0.44[b]	0.64[b]	0.35[c]	0.42[c]
Long-2	0.41	0.48	0.21[d]	0.19[d]

[a]The beginning of the growing season was changed to June 23 for Bonilla and June 24 for Curtis Lake.
[b]The beginning of the growing season was changed to April 9.
[c]The beginning of the growing season was changed to August 12.
[d]August and September values only were used.

Table 55. Time-weighted mean values of areal hourly primary production (mg $C \cdot m^{-2} \cdot h^{-1}$), daily primary production (mg $C \cdot m^{-2} \cdot d^{-1}$), primary production per unit of light (mg $C \cdot Einstein^{-1}$), volumetric zooplankton biomass (mg dry weight $\cdot m^{-3}$) and areal zooplankton biomass (mg dry weight $\cdot m^{-2}$) for the 1981 study lakes.

Lake and station	Areal hourly primary production (mg $C \cdot m^{-2} \cdot h^{-1}$)	Daily primary production (mg $C \cdot m^{-2} \cdot d^{-1}$)	Primary production per unit of light (mg $C \cdot Einstein^{-1}$)	Volumetric Zooplankton biomass (mg dry weight $\cdot m^{-3}$)	Areal Zooplankton biomass (mg dry weight $\cdot m^{-2}$)
Bonilla-1				10.9	270
Bonilla-2	23.6	233	9.42	13.1	328
Bonilla-3				10.2	256
Curtis-1				4.3	107
Curtis-2	15.5	168	8.26	3.7	92
Curtis-3				4.7	116
Great Central-1				3.7	201
Great Central-2				3.9	202
Henderson				7.6	416
Hobiton				5.1	254
Kennedy-1	54.3	606[d]	23.72[a]	5.6	251
Kennedy-2	8.2	83[d]	3.81[a]	4.1	202
Long-1[b]				5.6	247
Long-2[b]	4.5[c]	63[e]	3.64[f]	3.7	163
Long-3[b]				3.0	124
Sproat-1				5.0	248
Sproat-2				3.4	151
Sproat-3				3.2	163
Sproat-4				3.2	159

[a] the beginning of the growing season was changed to August 12.
[b] November 1980 values were used to calculate the time-weighted mean values.
[c] October and November 1980 values were used to calculate the time-weighted mean values.
[d] the growing season limits are from July 8 to September 11.
[e] the growing season limits are from April 7 to August 11.
[f] the growing season limits are from April 7 to September 9.

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[1] Maps showing station locations of Awun, Eden, Great Central, Henderson, Hobiton, Ian, Kitlope and Lowe lakes have been previously presented in Costella et al. (1982).

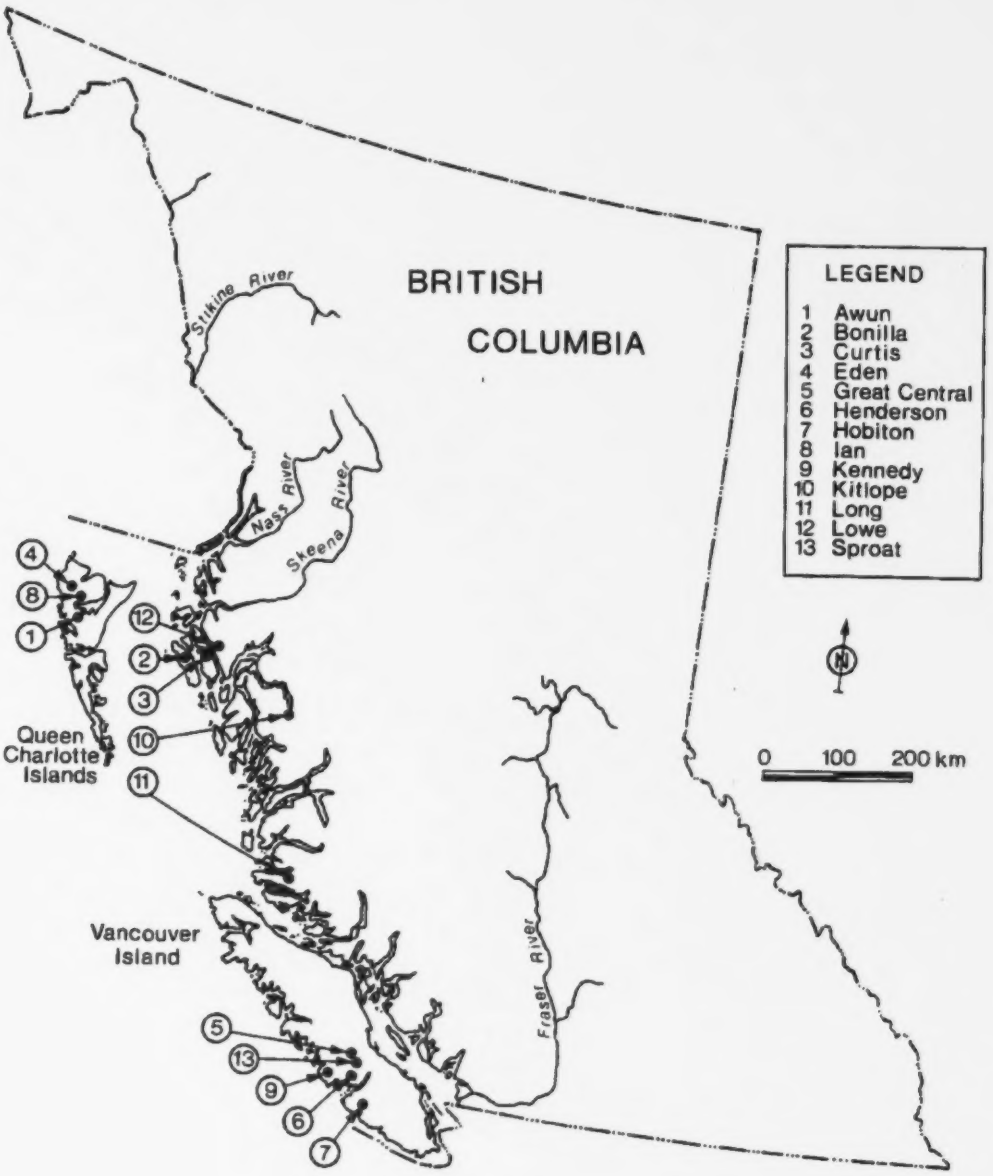

Fig. 1. Map of British Columbia showing locations of study lakes and streams.

Fig. 2. Map showing station and stream locations at Bonilla Lake.

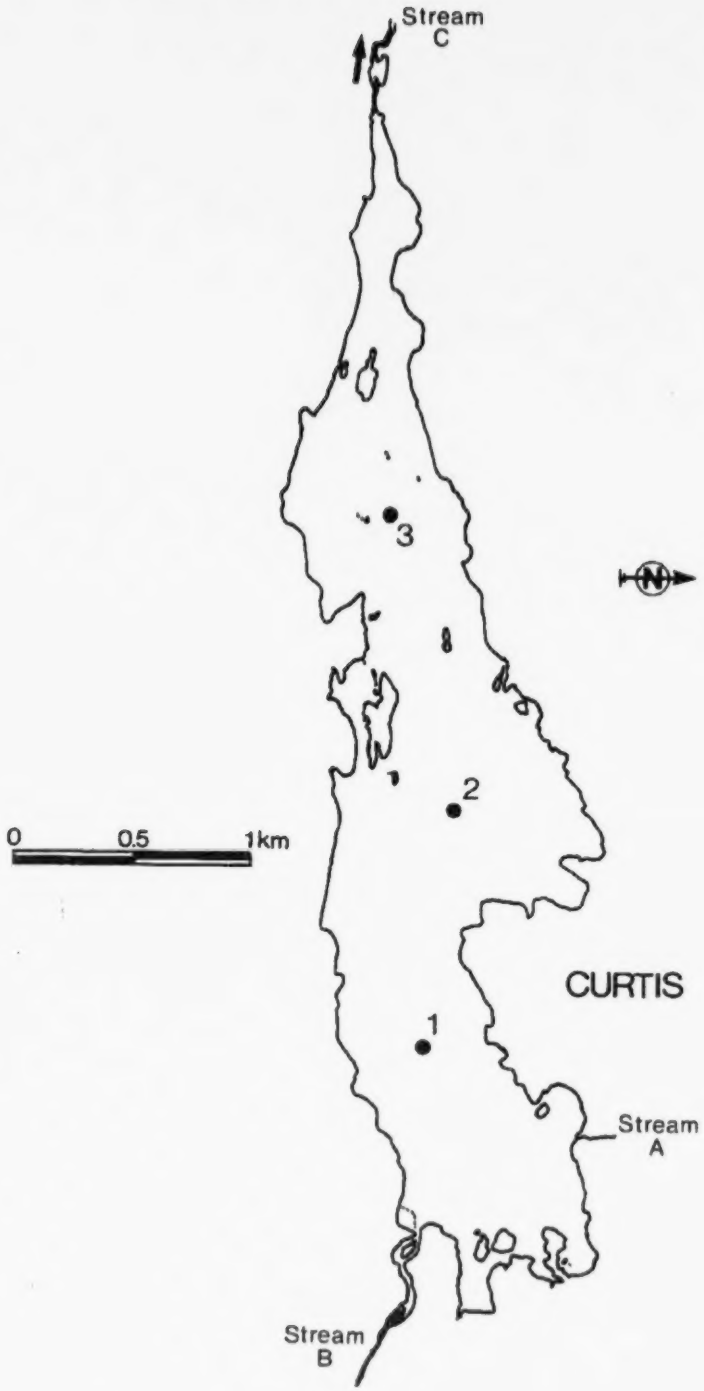

Fig. 3. Map showing station and stream locations at Curtis Lake.

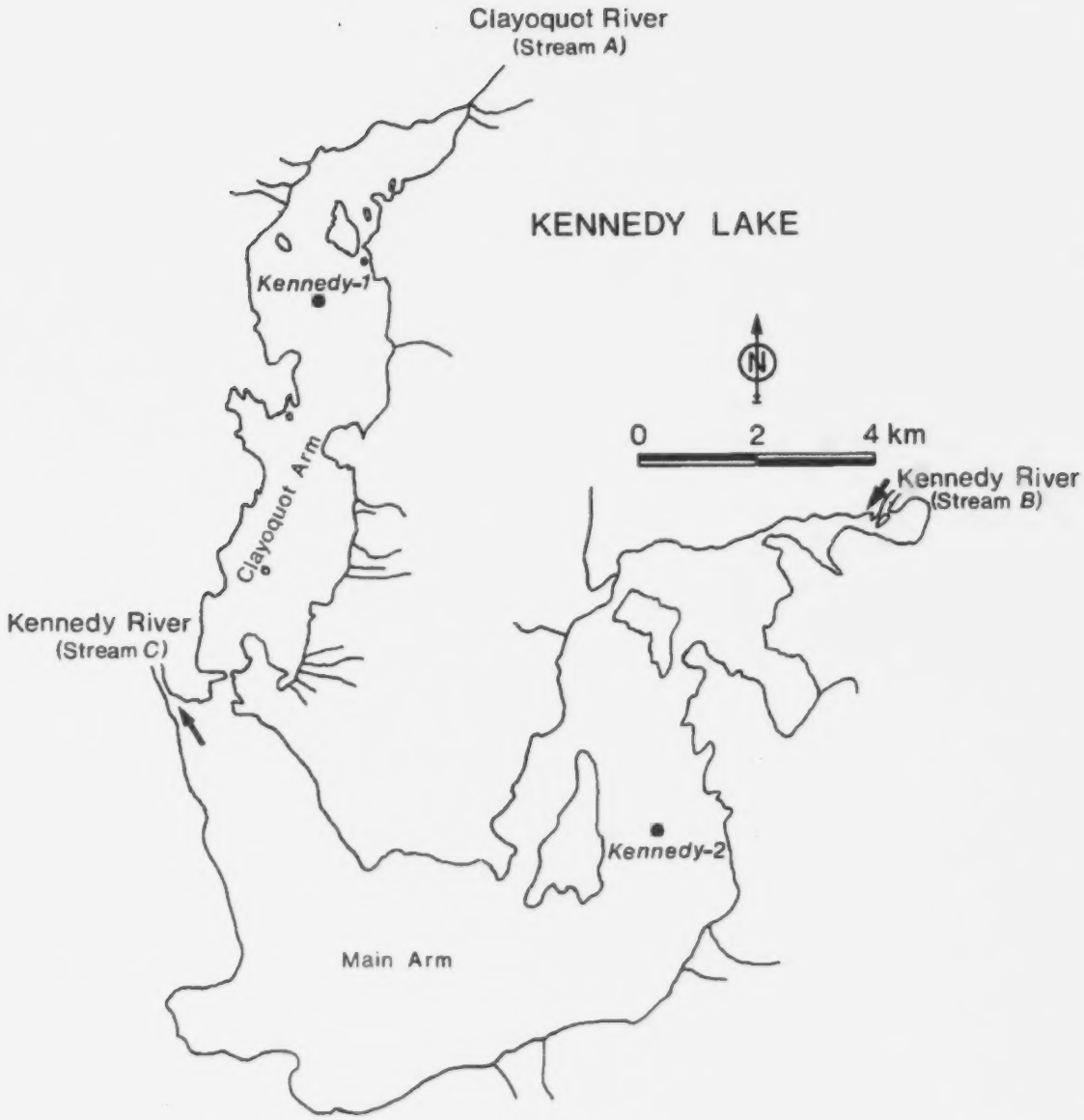

Fig. 4. Map showing station and stream locations at Kennedy Lake.

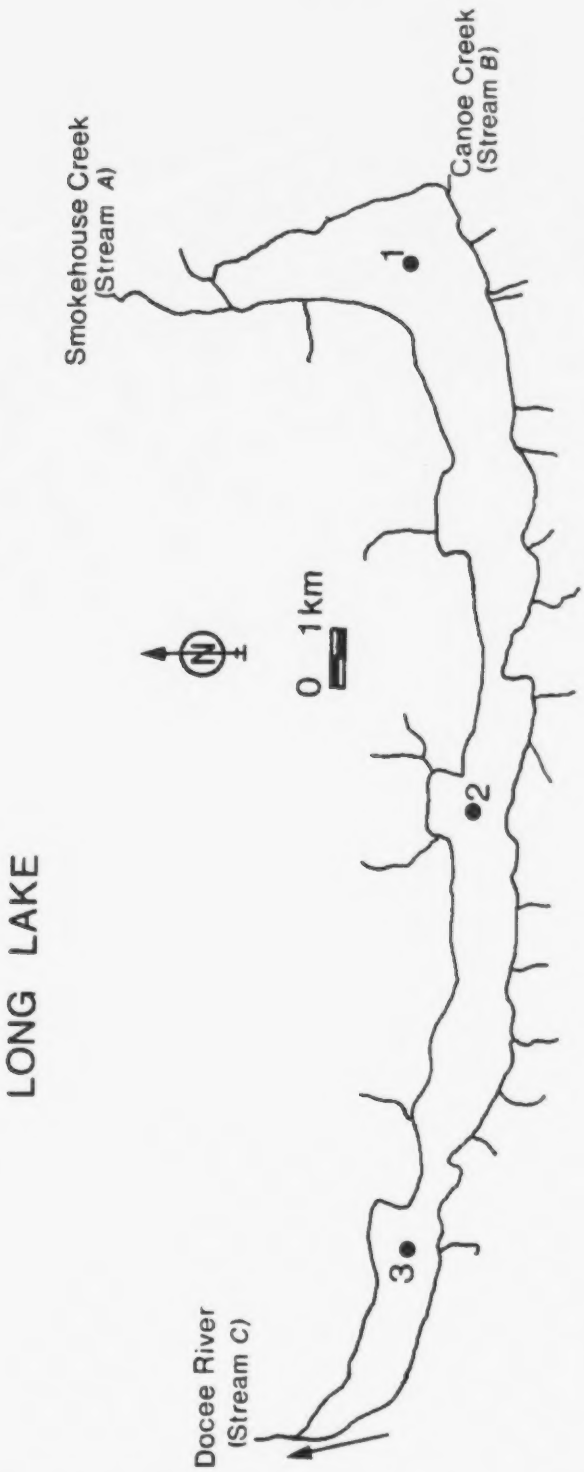

Fig. 5. Map showing station and stream locations at Long Lake.

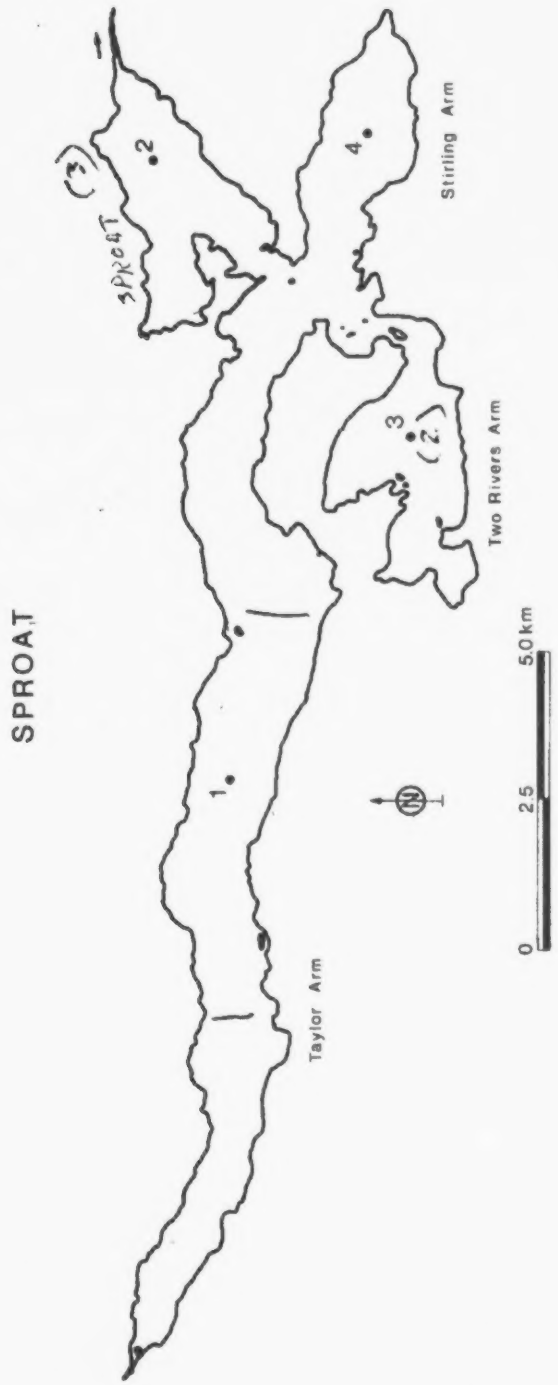

Fig. 6. Map showing station locations at Sproat Lake.

PART II. RAW DATA TABLES FOR MONITOR SURVEY - LIST OF APPENDIX TABLES

Appendix Table No.[a]	Lake, station and streams	Page
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3-35	Bonilla Lake, Stn. 1,2,3 and streams A,B,C,D,E.	3-35
36-66	Curtis Lake, Stn. 1,2,3 and streams A,B,C.	36-66
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86-93	Henderson Lake.	89-96
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194	Total phosphorus analysis ($\mu g\ P \cdot g\ dry\ weight^{-1}$) from sediments of the 1981 study lakes.	200

[a] vertical lines on tables denote depth of maximum stability and depth to which epilimnetic means are calculated.

Appendix Table 1. Physical, chemical and biological data from Awun Lake, Mar. 25, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	6.0	5.9	5.7	5.0
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	82	79	103	106
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	44	45	45	48
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	4	6	3
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	3	2	3	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1750	1750	1750	1740
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.92	0.60	0.56	<0.12
Total algal numbers ($\times 10^{8} \cdot m^{-3}$)	10	4	6	
Total algal volume ($mm^{3} \cdot m^{-3}$)	58	29	33	
Nanoplankton (m.d.20μ) numbers ($\times 10^{8} \cdot m^{-3}$)	10	4	6	2[a]
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	44	29	27	<1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	9	4	6	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	7	4	5	<1[a]

[a]ultraphytoplankton only; not included in mean

Appendix Table 2. Physical, chemical and biological data from Awun Lake, July 21, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	19.9	19.3	15.7	6.9
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	140	131	134	209
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	5	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	4	39
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	2	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1870	1870	1870	1760
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.48	1.99	1.74	0.28
Total algal numbers ($x10^{8} \cdot m^{-3}$)	66	72	57	
Total algal volume ($mm^{3} \cdot m^{-3}$)	323	352	396	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	66	72	56	
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	323	343	358	
Total algal carbon ($mg\ C \cdot m^{-3}$)	62	68	74	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	62	67	68	

Appendix Table 3. Physical, chemical and biological data from Bonilla Lake, Stn. 1, March 26, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	6.4	6.0	5.9	5.6
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.9	5.1	5.6	5.3
Particulate carbon (µg $C \cdot L^{-1}$)	104	171	278	103
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	128	158	113	94
Ammonia (µg $N \cdot L^{-1}$)	6	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	13	12	13	13
Particulate nitrogen (µg $N \cdot L^{-1}$)	30	25	29	24
Total phosphorus (µg $P \cdot L^{-1}$)	2	3	3	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	2	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	1	1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	500	500	500	500
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.14	1.44	1.00	1.69
Total chlorophyll (µg $\cdot L^{-1}$)	0.28	0.31	0.31	0.28
Total algal numbers ($x10^8 \cdot m^{-3}$)	14	4[a]	12	
Total algal volume ($mm^3 \cdot m^{-3}$)	57	43[a]	53	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	14	4[a]	12	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	26	25[a]	19	
Total algal carbon (mg $C \cdot m^{-3}$)	9	6[a]	6	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	5	4[a]	4	

[a]does not include ultraphytoplankton; not included in mean

Appendix Table 4. Physical, chemical and biological data from Bonilla Lake, Stn. 2, March 26, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	6.2	6.0	6.0	5.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	7.3	9.1	9.6	7.3
Particulate carbon (µg $C \cdot L^{-1}$)	150	470	560	246
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	90	130	117	129
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	13	12	11	11
Particulate nitrogen (µg $N \cdot L^{-1}$)	23	85	77	23
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	3	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	2	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	1	2	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	490	500	500	500
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.16		1.12	1.23
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.44	0.35	0.31	0.29
Total algal numbers ($x10^8 \cdot m^{-3}$)	22	20	16	
Total algal volume ($mm^3 \cdot m^{-3}$)	59	46	49	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	21	20	15	1[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	25	24	23	<1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	8	7	8	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	5	5	5	17[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 5. Physical, chemical and biological data from Bonilla Lake, Stn. 3, March 26, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	6.4	6.0	6.0	5.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)		8.0	11.6	6.3
Particulate carbon (µg $C \cdot L^{-1}$)	391	153	110	95
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	152	119	122	147
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	11	13	12	12
Particulate nitrogen (µg $N \cdot L^{-1}$)	23	21	22	20
Total phosphorus (µg $P \cdot L^{-1}$)	4	2	4	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	1	2	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	500	500	500	500
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.31	1.20	1.38	
Total chlorophyll (µg $\cdot L^{-1}$)	0.53	0.43	0.40	0.29
Total algal numbers ($x10^{8} \cdot m^{-3}$)	21	3[a]	24	
Total algal volume ($mm^{3} \cdot m^{-3}$)	61	40[a]	44	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	21	2[a]	23	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	30	12[a]	28	
Total algal carbon (mg $C \cdot m^{-3}$)	9	5[a]	8	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	6	2[a]	6	

[a] does not include ultraphytoplankton; not included in mean

Appendix Table 6. Physical, chemical and biological data from Bonilla Lake Streams, March 26, 1981.

Stream	A	B	C	D	E
Surface temperature (°C)	7.1	6.6	5.8	5.3	6.4
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.6	6.5	5.4	5.2	7.3
Particulate carbon (µg $C \cdot L^{-1}$)	359	270	415	467	192
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	191	104	121	130	101
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	1	2	1	1	12
Particulate nitrogen (µg $N \cdot L^{-1}$)	31	20	10	9	32
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2	4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	1	<1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	550	420	770	870	500
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.85	0.98	0.37	0.37	1.25

Appendix Table 7. Physical, chemical and biological data from Bonilla Lake, Stn. 1, April 30, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	7.0	6.9	6.8	6.4
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.2	5.4	4.7	6.0
Particulate carbon (µg $C \cdot L^{-1}$)	202	207	214	218
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	182	231	136	239
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	14	14	13	12
Particulate nitrogen (µg $N \cdot L^{-1}$)	23	23	22	18
Total phosphorus (µg $P \cdot L^{-1}$)	4	4	4	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	460	460	460	450
Total dissolved solids (mg $\cdot L^{-1}$)			16.4	
Bacteria numbers (x$10^{6} \cdot mL^{-1}$)	1.00	1.04	1.19	1.09
Total chlorophyll (µg $\cdot L^{-1}$)	<0.12	0.27	<0.12	<0.12
Total algal numbers (x$10^{8} \cdot m^{-3}$)	6	8	11	
Total algal volume ($mm^{3} \cdot m^{-3}$)	50	45	85	
Nanoplankton (m.d.20µ) numbers (x$10^{8} \cdot m^{-3}$)	6	8	11	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	29	33	48	
Total algal carbon (mg $C \cdot m^{-3}$)	7	8	13	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	6	7	10	

Appendix Table 8. Physical, chemical and biological data from Bonilla Lake, Stn. 2, April 30, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	7.0	7.0	7.0	6.9	6.9	6.8	6.8	6.5
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.37	0.37	0.36	0.35	0.40	0.39	0.34	0.38
Dissolved organic carbon (mg $C \cdot L^{-1}$)		5.6		5.4	5.1			5.8
Particulate carbon (µg $C \cdot L^{-1}$)		189		220	208			221
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		167		215	183			145
Ammonia (µg $N \cdot L^{-1}$)		<4		4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		14		15	14			13
Particulate nitrogen (µg $N \cdot L^{-1}$)		17		21	24			30
Total phosphorus (µg $P \cdot L^{-1}$)		4		3	5			3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		1	2			1
Particulate phosphorus (µg $P \cdot L^{-1}$)		2		2	2			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		450		450	450			450
Total dissolved solids (mg $\cdot L^{-1}$)					16.4			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.13	1.06		1.00	1.04	1.10	1.25	1.07
Light bottle glucose turnover time (h)	85	56	50	110	60	104	80	79
Dark bottle glucose turnover time (h)		116		160	381			
Total chlorophyll (µg $\cdot L^{-1}$)		0.28		0.35	0.30			<0.12
Total algal numbers ($x10^8 \cdot m^{-3}$)		12		13	15			
Total algal volume ($mm^3 \cdot m^{-3}$)		58		76	68			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		12		13	15			1 [b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		27		40	37			<1 [b]
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.18	0.11	0.08	0.10	0.01	0.00	0.00	0.00
Total algal carbon (mg $C \cdot m^{-3}$)		9		11	11			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		6		8	8			<1 [b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only; not included in mean

Appendix Table 9. Physical, chemical and biological data from Bonilla Lake, Stn. 3, April 30, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.1	8.0	7.8	7.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.1	6.1	5.9	4.1
Particulate carbon (µg $C \cdot L^{-1}$)	186	181	176	207
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	156	138	152	207
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	16	16	15	15
Particulate nitrogen (µg $N \cdot L^{-1}$)	28	26	33	35
Total phosphorus (µg $P \cdot L^{-1}$)	4	4	5	4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	2	2	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	2	2	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	450	450	450	460
Total dissolved solids ($mg \cdot L^{-1}$)			21.4	
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.82	1.32	1.16	1.32
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.78	0.83	0.58	0.49
Total algal numbers ($x10^8 \cdot m^{-3}$)	16	19	17	
Total algal volume ($mm^3 \cdot m^{-3}$)	121	124	85	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	15	18	17	8[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	49	45	58	2[a]
Total algal carbon ($mg \cdot m^{-3}$)	16	17	15	
Nanoplankton (m.d.20µ) carbon ($mg \cdot m^{-3}$)	10	9	12	<1[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 10. Physical, chemical and biological data from Bonilla Lake Streams, April 30, 1981.

Stream	A	B	C	D	E
Surface temperature (°C)	10.0		7.7	7.5	8.6
Dissolved organic carbon (mg $C \cdot L^{-1}$)	9.0	6.8	9.1	8.0	4.5
Particulate carbon (µg $C \cdot L^{-1}$)	245	235	187	202	171
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	262	292	169	244	152
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	3	<1	<1	<1	13
Particulate nitrogen (µg $N \cdot L^{-1}$)	32	44	24	32	31
Total phosphorus (µg $P \cdot L^{-1}$)	3	3	2	2	5
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	2	<1	<1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	590	390	430	480	460
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.86	0.86	0.63	0.58	1.13

Appendix Table 11. Physical, chemical and biological data from Bonilla Lake, Stn. 1, May 26, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	11.6	11.2	10.8	6.9
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.2	4.9	5.6	6.1
Particulate carbon (µg $C \cdot L^{-1}$)	382	410	308	294
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	154	124	108	109
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	5
Nitrate (µg $N \cdot L^{-1}$)	4	5	1	13
Particulate nitrogen (µg $N \cdot L^{-1}$)	77	83	56	30
Total phosphorus (µg $P \cdot L^{-1}$)	7	7	4	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	9	9	4	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	330	330	370	420
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.12	1.07	1.28	0.88
Total chlorophyll (µg $\cdot L^{-1}$)	7.19	5.23	4.91	0.45
Total algal numbers ($x10^{8} \cdot m^{-3}$)	220	175	127	
Total algal volume ($mm^{3} \cdot m^{-3}$)	4033	4097	2826	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	175	130	95	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	149	143	76	
Total algal carbon (mg $C \cdot m^{-3}$)	337	337	226	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	32	30	16	

Appendix Table 12. Physical, chemical and biological data from Bonilla Lake, Stn. 2, May 26, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	12.5	11.9	11.7	11.5	11.1	10.4	9.4	7.0
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]	0.22	0.21	0.21	0.27	0.31	0.36	0.51	0.52
Dissolved organic carbon (mg $C \cdot L^{-1}$)		3.7		6.2	3.4			6.1
Particulate carbon (µg $C \cdot L^{-1}$)		408		134	285			178
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		126		137	160			132
Ammonia (µg $N \cdot L^{-1}$)		<4		5	<4			6
Nitrate (µg $N \cdot L^{-1}$)		3		2	5			<1
Particulate nitrogen (µg $N \cdot L^{-1}$)		85		25	55			25
Total phosphorus (µg $P \cdot L^{-1}$)		6		5	5			3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		2	2			1
Particulate phosphorus (µg $P \cdot L^{-1}$)				4	6			3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		310		310	330			420
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.85	0.97		1.01	1.62	1.34	0.61	0.77
Light bottle glucose turnover time (h)	39	31	28	24	28	36	51	96
Dark bottle glucose turnover time (h)		136		89	51			184
Total chlorophyll (µg $\cdot L^{-1}$)		7.52		8.56	7.63			0.52
Total algal numbers ($\times 10^8 \cdot m^{-3}$)		191		209	171			
Total algal volume ($mm^3 \cdot m^{-3}$)		4973		7449	4848			
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)		138		129	120			11[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		240		176	114			2[b]
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	6.24	5.68	4.23	2.45	0.93	0.32	0.04	0.01
Total algal carbon (mg $C \cdot m^{-3}$)		404		577	377			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		46		35	23			<1[b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only

Appendix Table 13. Physical, chemical and biological data from Bonilla Lake, Stn. 3, May 26, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	12.3	12.2	12.1	8.4
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.5	5.2	4.2	7.5
Particulate carbon (µg $C \cdot L^{-1}$)	419	432	433	204
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	102	167	172	130
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	5	5
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)	78	76	78	30
Total phosphorus (µg $P \cdot L^{-1}$)	6	6	6	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	6	6	7	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	290	290	290	430
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.38	1.04	0.95	1.01
Total chlorophyll ($\mu g \cdot L^{-1}$)	9.37	8.18	8.61	1.07
Total algal numbers ($x10^8 \cdot m^{-3}$)	216	184	195	
Total algal volume ($mm^3 \cdot m^{-3}$)	5925	4104	5606	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	151	144	135	8[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	173	162	214	1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	463	331	447	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	35	33	42	<1[a]

[a] ultraphytoplankton only

Appendix Table 14. Physical, chemical and biological data from Bonilla Lake Streams, May 26, 1981.

Stream	A	B	C	D	E
Surface temperature (°C)	13.6	14.1	10.0	9.7	13.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.9	6.7	5.2	6.1	5.4
Particulate carbon (µg $C \cdot L^{-1}$)	303	497	170	155	365
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	251	173	172	151	151
Ammonia (µg $N \cdot L^{-1}$)	<4	4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	13	2	<1	<1	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)	46	77	30	42	74
Total phosphorus (µg $P \cdot L^{-1}$)	3	4	1	<1	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	1	<1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	460	330	1140	1070	280
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.01	0.98	0.33	0.30	0.91

Appendix Table 15. Physical, chemical and biological data from Bonilla Lake, Stn. 1, June 23, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.6	13.3	13.0	8.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.9	2.6	13.1	5.3
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	156	146	156	131
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	5
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	13
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	8	7	6	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	5	4	5	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	6	6	5	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	<10	<10	<10	440
Total dissolved solids (mg $\cdot L^{-1}$)	16.5		16.2	
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.43	1.23	1.28	1.25
Total chlorophyll (µg $\cdot L^{-1}$)	9.19	5.70	6.49	1.96
Total algal numbers ($x10^8 \cdot m^{-3}$)	161	154	173	
Total algal volume ($mm^3 \cdot m^{-3}$)	2837	2641	2503	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	117	111	134	11[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	91	107	126	3[a]
Total algal carbon (mg $C \cdot m^{-3}$)	242	233	225	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	19	22	27	1[a]

[a] ultraphytoplankton only

Appendix Table 16. Physical, chemical and biological data from Bonilla Lake, Stn. 2, June 23, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	13.8	13.7	13.5	13.4	13.1	11.7	10.6	7.5
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.25	0.23	0.21	0.24	0.26	0.40	0.40	0.48
Dissolved organic carbon (mg $C \cdot L^{-1}$)		5.2			4.2			4.6
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		124		166	164			145
Ammonia (µg $N \cdot L^{-1}$)		4		<4	<4			4
Nitrate (µg $N \cdot L^{-1}$)		<1		<1	<1			14
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		7		8	7			4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		4		5	5			4
Particulate phosphorus (µg $P \cdot L^{-1}$)		5		6	6			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		<10		<10	<10			450
Total dissolved solids (mg $\cdot L^{-1}$)		14.9		16.8				
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	2.51	3.06		2.20	2.38	2.11	1.95	1.43
Light bottle glucose turnover time (h)	37	16	15	17	17	23	26	90
Dark bottle glucose turnover time (h)		36		83	63			82
Total chlorophyll (µg $\cdot L^{-1}$)		5.51		5.10	5.45			1.58
Total algal numbers ($x10^8 \cdot m^{-3}$)		149		122	159			
Total algal volume ($mm^3 \cdot m^{-3}$)		2271		2490	2574			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		112		82	118			2 [b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		120		98	106			<1 [b]
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	5.71	4.24	1.54	0.50	0.08	0.03	0.02	0.03
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.54		0.07	0.05			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.54		0.04	0.01			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		3.16		0.39	0.03			
Total algal carbon (mg $C \cdot m^{-3}$)		204		216	225			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		26		21	22			<1 [b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only

Appendix Table 17. Physical, chemical and biological data from Bonilla Lake, Stn. 3, June 23, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.5	13.2	12.7	7.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.1	3.1		
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	176	178	133	153
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	4
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	2	13
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	8	8	7	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	5	6	5	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	5	6	5	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	<10	<10	<10	480
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	2.11	2.12	2.18	1.46
Total chlorophyll (µg $\cdot L^{-1}$)	7.29	6.81	5.23	1.33
Total algal numbers ($x10^8 \cdot m^{-3}$)	205	137	81	
Total algal volume ($mm^3 \cdot m^{-3}$)	3357	1644	2281	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	150	108	46	11[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	132	102	61	3[a]
Total algal carbon (mg $C \cdot m^{-3}$)	293	152	188	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	28	22	12	1[a]

[a] ultraphytoplankton only

Appendix Table 18. Physical, chemical and biological data from Bonilla Lake Streams, June 23, 1981.

Stream	A	B	C	D	E
Surface temperature (°C)	13.2	13.7	13.0	10.1	13.7
Dissolved organic carbon (mg $C \cdot L^{-1}$)	13.8	5.4	6.6	1.8	6.6
Particulate carbon (µg $C \cdot L^{-1}$)					
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	192	196	145	95	112
Ammonia (µg $N \cdot L^{-1}$)	4	4	<4	4	6
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	<1	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)					
Total phosphorus (µg $P \cdot L^{-1}$)	3	3	1	1	7
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	4	3	2	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	<1	<1	5
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	670	510	1240	1260	<10
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.80	0.52	0.35	0.35	2.39

Appendix Table 19. Physical, chemical and biological data from Bonilla Lake, Stn. 1, July 24, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.9	17.6	17.3	8.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.9	3.5	6.0	6.0
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	121	121	131	112
Ammonia (µg $N \cdot L^{-1}$)	5	<4	4	10
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	2	11
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	12	10	10	4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	3	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	5	6	7	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	<10	<10	<10	390
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	2.00	1.58	1.54	0.86
Total chlorophyll (µg $\cdot L^{-1}$)	8.28	11.5	11.5	2.94
Total algal numbers ($x10^8 \cdot m^{-3}$)	308	203	226	
Total algal volume ($mm^3 \cdot m^{-3}$)	1639	1457	1110	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	288	185	214	2[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	308	94	103	1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	200	149	123	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	66	21	23	<1[a]

[a] ultraphytoplankton only

Appendix Table 20. Physical, chemical and biological data from Bonilla Lake, Stn. 2, July 24, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	17.6	17.5	17.4	17.3	17.2	16.0	12.0	7.8
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.51	0.58	0.66	0.61	0.52	0.81	0.95	0.99
Dissolved organic carbon (mg $C \cdot L^{-1}$)		4.9		9.4	4.0			5.3
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		149		151	122			121
Ammonia (µg $N \cdot L^{-1}$)		<4		4	4			<4
Nitrate (µg $N \cdot L^{-1}$)		<1		<1	<1			<1
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		9		10	12			3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		3	2			2
Particulate phosphorus (µg $P \cdot L^{-1}$)		7		8	9			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		<10		<10	<10			<10
Total dissolved solids (mg $\cdot L^{-1}$)		21.0			14.0			
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.97	0.95		1.75	1.71	1.86	1.48	0.60
Light bottle glucose turnover time (h)	85	19	24	21	37	26	85	252
Dark bottle glucose turnover time (h)		43		95	106			252
Total chlorophyll (µg $\cdot L^{-1}$)		9.04		9.37	9.15			1.68
Total algal numbers ($\times 10^8 \cdot m^{-3}$)		219		249	266			25
Total algal volume ($mm^3 \cdot m^{-3}$)		1169		1057	1155			1072
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)		205		235	253			9
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		105		105	113			5
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	17.47	17.90	13.84	4.81	0.54	0.09	0.10	0.01
Fract. primary production 0.2-1.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.07	0	0	0	0	0.03	0.04	0
Fract. primary production 1.0-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	5.34	9.99	7.79	2.56	0.30	0	0.01	0.03
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	5.03	4.22	3.11	0.72	0.10	0	0	0
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	6.07	6.31	4.76	1.68	0.22	0.21	0.07	0.06
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [b]	2.97							
pH	5.3							
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)	10.0							
Total algal carbon (mg $C \cdot m^{-3}$)		116		110	125			85
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		23		24	26			1

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] values determined using the potentiometric method (APHA 1976)

Appendix Table 21. Chemical and biological data from Bonilla Lake, Stn. 2, July 24, 1981.

Depth (m)	0	1	2	3	4	5	6
Total phosphorus ($\mu g \cdot L^{-1}$)	8	9	11	10	9	12	9
Total chlorophyll ($\mu g \cdot L^{-1}$)	9.70	9.04	6.57	9.37	8.43	9.15	8.17
Total algal numbers ($x10^8 \cdot m^{-3}$)	277	219	338	249	225	266	274
Total algal volume ($mm^3 \cdot m^{-3}$)	699	1169	816	1057	619	1155	1087
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	269	205	329	235	216	253	262
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	202	105	200	105	147	113	121
Total algal carbon ($mg\ C \cdot m^{-3}$)	89	116	105	110	78	125	117
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	44	23	44	24	32	26	27

Depth (m)	7	8	9	10	11	12	13
Total phosphorus ($\mu g \cdot L^{-1}$)	9	9	5	4	5	5	4
Total chlorophyll ($\mu g \cdot L^{-1}$)	8.72	8.61	3.86	2.69	2.63	2.21	2.18
Total algal numbers ($x10^8 \cdot m^{-3}$)	261	316	27	18	9	19	23
Total algal volume ($mm^3 \cdot m^{-3}$)	1186	1272	568	438	524	376	496
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	246	300	19	12	2	12	16
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	110	127	31	19	10	11	12
Total algal carbon ($mg\ C \cdot m^{-3}$)	123	135	58	42	47	34	43
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	25	29	6	4	2	2	2

Depth (m)	14	15	16	17	18	19	20
Total phosphorus ($\mu g \cdot L^{-1}$)	3	3	4	4	3	3	3
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.02	1.24	1.78	1.86	1.83	1.61	1.68
Total algal numbers ($x10^8 \cdot m^{-3}$)	12	10	17	14	11	16	25
Total algal volume ($mm^3 \cdot m^{-3}$)	357	498	606	545	550	916	1072
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	7	2	7	5	3	2	9
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	12	9	14	7	16	9	5
Total algal carbon ($mg\ C \cdot m^{-3}$)	31	41	51	45	45	75	85
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	2	2	3	1	3	2	1

Appendix Table 22. Physical, chemical and biological data from Bonilla Lake, Stn. 3, July 24, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.2	17.2	17.0	7.6
Dissolved organic carbon (mg $C \cdot L^{-1}$)	8.8	5.2	7.5	4.5
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	143	143	120	122
Ammonia (µg $N \cdot L^{-1}$)	5	<4	5	9
Nitrate (µg $N \cdot L^{-1}$)	1	1	<1	13
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	8	7	7	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	5	6	7	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	<10	<10	<10	420
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.74	1.98	1.42	0.94
Total chlorophyll (µg $\cdot L^{-1}$)	5.00	4.94	5.35	2.15
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	130	77	152	
Total algal volume ($mm^3 \cdot m^{-3}$)	620	666	714	
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	122	67	144	5[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	79	39	75	1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	66	67	72	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	17	9	17	<1[a]

[a] ultraphytoplankton only

Appendix Table 23. Physical, chemical and biological data from Bonilla Lake Streams, July 24, 1981.

Stream	A	B	C	D	E
Surface temperature (°C)	18.0	18.0	16.5	13.5	17.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	8.0	8.0	5.4	5.7	5.4
Particulate carbon (µg $C \cdot L^{-1}$)					
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	227	236	137	118	118
Ammonia (µg $N \cdot L^{-1}$)	9	9	6	12	7
Nitrate (µg $N \cdot L^{-1}$)	2	1	<1	16	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)					
Total phosphorus (µg $P \cdot L^{-1}$)	5	5	7	6	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	3	2	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<2	<2	4	4	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	930	390	2210	2540	<10
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.51	1.52	0.96	0.63	1.38

Appendix Table 24. Physical, chemical and biological data from Bonilla Lake, Stn. 1, Aug. 27, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.2	16.8	16.4	8.6
Dissolved organic carbon (mg $C \cdot L^{-1}$)	5.2	6.3	5.2	3.9
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	124	116	113	78
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	6
Nitrate (µg $N \cdot L^{-1}$)	3	1	1	12
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	10	10	9	4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	3	1	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	6	6	6	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	200	190	210	440
Total dissolved solids (mg $\cdot L^{-1}$)	20.2		19.8	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	2.38	4.59	2.71	1.56
Total chlorophyll (µg $\cdot L^{-1}$)	10.80	10.51	9.80	1.33
Total algal numbers ($x10^{8} \cdot m^{-3}$)	219	184	214	
Total algal volume ($mm^{3} \cdot m^{-3}$)	2444	1990	1710	
Nanoplankton (n.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	152	128	166	
Nanoplankton (n.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	452	330	327	
Total algal carbon (mg $C \cdot m^{-3}$)	398	326	279	
Nanoplankton (n.d.20µ) carbon (mg $C \cdot m^{-3}$)	82	60	58	

Appendix Table 25. Physical, chemical and biological data from Bonilla Lake, Stn. 2, Aug. 27, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20	68
Temperature (°C)	17.1	17.0	17.0	16.8	16.5	16.1	14.2	7.9	
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]	0.53	0.52	0.56	0.60	0.60	0.75	1.24	1.17	
Dissolved organic carbon (mg $C \cdot L^{-1}$)		6.5		5.4	6.4			7.3	4.9
Particulate carbon (µg $C \cdot L^{-1}$)									
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		117		110	110			108	98
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			5	21
Nitrate (µg $N \cdot L^{-1}$)		3		2	1			12	17
Particulate nitrogen (µg $N \cdot L^{-1}$)									
Total phosphorus (µg $P \cdot L^{-1}$)		10		9	9			3	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		2	5			2	3
Particulate phosphorus (µg $P \cdot L^{-1}$)		6		4	6			<2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		160		190	160			460	520
Total dissolved solids (mg $\cdot L^{-1}$)		21.0			14.9				
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.92	1.67		2.29	2.61	1.63	3.21	1.48	0.73
Light bottle glucose turnover time (h)	32	29	24	23	27	24	33	202	
Dark bottle glucose turnover time (h)		37		43	37			402	
Total chlorophyll (µg $\cdot L^{-1}$)		10.51		9.80	9.80			0.82	0.64
Total algal numbers ($x10^8 \cdot m^{-3}$)		188		176	214				4
Total algal volume ($mm^3 \cdot m^{-3}$)		1559		2166	3007				167
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		145		116	147			2[b]	1
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		328		384	883			<1[b]	3
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	22.26	14.29	5.74	1.66	0.10	0.30	0.23	0.13	
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.10		0.18					
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		2.93		0.04					
Fract. primary production > 8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		10.27		1.44	0.45				
Total algal carbon (mg $C \cdot m^{-3}$)		261		352	449				14
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		61		64	117			<1[b]	1

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only

Appendix Table 26. Physical, chemical and biological data from Bonilla Lake, Stn. 3, August 27, 1981.

Depth (m)	1	3	5	20	60
Temperature (°C)	16.7	16.5	16.4	7.4	
Dissolved organic carbon (mg $C \cdot L^{-1}$)	5.1	6.4	6.9	4.9	6.4
Particulate carbon (µg $C \cdot L^{-1}$)	152	164	210	166	162
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	<4	<4	<4	<4	25
Ammonia (µg $N \cdot L^{-1}$)	3	2	2	12	19
Nitrate (µg $N \cdot L^{-1}$)					
Particulate nitrogen (µg $N \cdot L^{-1}$)	9	8	8	3	4
Total phosphorus (µg $P \cdot L^{-1}$)	2	4	5	4	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	6	3	6	<2	<2
Particulate phosphorus (µg $P \cdot L^{-1}$)	150	150	160	470	520
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1.75	4.36	2.74	1.12	1.15
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	9.23	8.67	8.81	0.90	0.63
Total chlorophyll (µg $\cdot L^{-1}$)	199	137	167		5
Total algal numbers ($x10^8 \cdot m^{-3}$)	2058	2138	2114		102
Total algal volume ($mm^3 \cdot m^{-3}$)	144	72	112	4[a]	3
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	458	123	383	1[a]	12
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	338	335	326		10
Total algal carbon (mg $C \cdot m^{-3}$)	85	19	65	<1[a]	3
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)					

[a] ultraphytoplankton only

Appendix Table 27. Physical, chemical and biological data from Bonilla Lake Streams, August 27, 1981.

Stream	A	B	C	D	E
Surface temperature (°C)	14.4	16.8	15.0	12.3	16.9
Dissolved organic carbon (mg $C \cdot L^{-1}$)	9.5	10.1	6.4	6.5	6.7
Particulate carbon (µg $C \cdot L^{-1}$)					
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	268	261		117	180
Ammonia (µg $N \cdot L^{-1}$)	6	5	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	4	3	3	2	2
Particulate nitrogen (µg $N \cdot L^{-1}$)					
Total phosphorus (µg $P \cdot L^{-1}$)	4	4	6	3	8
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	2	3	2	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	<2	4	4	<2	6
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1040	770	960	1880	140
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.99	0.75	2.11	0.30	2.07

Appendix Table 28. Physical, chemical and biological data from Bonilla Lake, Stn. 1, September 23, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	14.0	13.8	13.7	9.7
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.8	2.9	1.7	4.8
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	152	182	175	124
Ammonia (µg $N \cdot L^{-1}$)	11	10	10	10
Nitrate (µg $N \cdot L^{-1}$)	6	6	6	13
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	8	8	7	4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	4	4	3	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	4	4	3	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	320	320	320	410
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.37	1.38	1.67	1.34
Total chlorophyll (µg $\cdot L^{-1}$)	2.61	1.98	2.52	0.96
Total algal numbers ($x10^8 \cdot m^{-3}$)	129	58	89	
Total algal volume ($mm^3 \cdot m^{-3}$)	642	389	336	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	119	53	83	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	124	120	108	
Total algal carbon (mg $C \cdot m^{-3}$)	81	51	42	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	23	21	19	

Appendix Table 29. Physical, chemical and biological data from Bonilla Lake, Stn. 2, Sept. 23, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	13.8	13.7	13.7	13.6	13.5	13.3	13.2	8.6
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]	0.97	0.45	0.47	0.64	0.57	0.60	0.56	0.89
Dissolved organic carbon (mg $C \cdot L^{-1}$)		6.6		5.0	6.2			7.0
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		170		133	169			108
Ammonia (µg $N \cdot L^{-1}$)		8		8	9			10
Nitrate (µg $N \cdot L^{-1}$)		6		5	4			9
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		6		6	7			4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		3	2			2
Particulate phosphorus (µg $P \cdot L^{-1}$)		3		3	3			1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		310		310	310			380
Total dissolved solids (mg $\cdot L^{-1}$)		20.1			16.3			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.35	1.49			0.98	2.21	1.49	1.15
Light bottle glucose turnover time (h)	44	31	27	44	83	74	39	415
Dark bottle glucose turnover time (h)		69		48	56			553
Total chlorophyll (µg $\cdot L^{-1}$)		3.01		2.69	3.29			1.16
Total algal numbers ($x10^8 \cdot m^{-3}$)		112		85	64			
Total algal volume ($mm^3 \cdot m^{-3}$)		310		329	822			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		106		79	59			2[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		95		73	78			<1[b]
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	6.34	2.15	1.02	0.53	0.05	0.06	0.07	0.01
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.63		0.17	0.00			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.69		0.17	0.03			
Fract. primary production > 8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.83		0.19	0.02			
Total algal carbon (mg $C \cdot m^{-3}$)		42		40	101			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		20		16	16			<1[b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only

Appendix Table 30. Physical, chemical and biological data from Bonilla Lake, Stn. 3, September 23, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.9	13.8	13.6	7.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.9	5.0	5.1	
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	132	137	133	111
Ammonia (µg $N \cdot L^{-1}$)	7	8	7	10
Nitrate (µg $N \cdot L^{-1}$)	5	5	4	10
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	8	7	7	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	3	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	4	4	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	290	290	290	390
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.86	1.79	1.56	1.20
Total chlorophyll (µg $\cdot L^{-1}$)	3.92	4.23	4.23	0.96
Total algal numbers ($x10^8 \cdot m^{-3}$)	149	119	119	
Total algal volume ($mm^3 \cdot m^{-3}$)	417	540	458	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	143	110	110	2[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	174	155	129	<1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	60	66	58	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	31	26	23	<1[a]

[a] ultraphytoplankton only

Appendix Table 31. Physical, chemical and biological data from Bonilla Lake Streams, September 23, 1981.

Stream	A	B	C	D	E
Surface temperature (°C)	11.7		10.6	10.4	13.9
Dissolved organic carbon (mg $C \cdot L^{-1}$)	8.0	9.4	6.3	7.6	7.4
Particulate carbon (µg $C \cdot L^{-1}$)					
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	211	194	150	162	142
Ammonia (µg $N \cdot L^{-1}$)	4	5	26	7	12
Nitrate (µg $N \cdot L^{-1}$)	4	2	9	3	4
Particulate nitrogen (µg $N \cdot L^{-1}$)					
Total phosphorus (µg $P \cdot L^{-1}$)	3	4	4	2	6
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	3	3	2	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	1	1	<1	4
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1190	700	1760	1630	340
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.29	1.02	0.60	0.30	0.93

Appendix Table 32. Physical, chemical and biological data from Bonilla Lake, Stn. 1, Oct. 28, 1981.

Depth (m)	1	3	5	20
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.1	4.8		3.4
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	159	149	133	153
Ammonia (µg $N \cdot L^{-1}$)	10	9	7	7
Nitrate (µg $N \cdot L^{-1}$)	9	8	8	7
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	3	4	5	5
Particulate phosphorus (µg $P \cdot L^{-1}$)	4	4	4	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	400	400	400	490
Total dissolved solids (mg $\cdot L^{-1}$)	22.6		21.7	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.69	1.68	1.56	1.98
Total chlorophyll (µg $\cdot L^{-1}$)	4.79	4.79	5.00	4.07
Total algal numbers ($x10^{8} \cdot m^{-3}$)	104	136	113	
Total algal volume ($mm^{3} \cdot m^{-3}$)	610	597	750	
Nanoplankton (n.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	94	126	101	72[a]
Nanoplankton (n.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	66	62	80	17[a]
Total algal carbon (mg $C \cdot m^{-3}$)	63	62	75	
Nanoplankton (n.d.20µ) carbon (mg $C \cdot m^{-3}$)	14	13	16	4[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 33. Physical, chemical and biological data from Bonilla Lake, Stn. 2, Oct. 28, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	10.3	10.3	10.3	10.3	10.2	10.2	10.1	9.7
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.78	0.76	0.70	0.66	0.87	0.91	0.93	1.12
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.9		5.3	3.6			2.3
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		121		128	132			123
Ammonia (µg $N \cdot L^{-1}$)		8		8	9			9
Nitrate (µg $N \cdot L^{-1}$)		8		8	8			9
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		4		4	5			2
Particulate phosphorus (µg $P \cdot L^{-1}$)		3		4	4			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		380		380	380			430
Total dissolved solids (mg $\cdot L^{-1}$)		23.3			21.6			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.44	1.29		1.86	0.99	1.40	1.15	1.03
Light bottle glucose turnover time (h)	175	93	49	192	101	91	129	126
Dark bottle glucose turnover time (h)		136		205	107			111
Total chlorophyll (µg $\cdot L^{-1}$)		4.50		4.71	4.29			2.55
Total algal numbers ($x10^8 \cdot m^{-3}$)		116		68	105			
Total algal volume ($mm^3 \cdot m^{-3}$)		562		447	526			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		107		60	96			64[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		58		36	49			15[b]
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	2.06	0.70	0.23	0.09	0.02	0.04	0.05	0.03
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.20		0.01	0.00			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.15		0.01	0.03			
Fract. primary production > 8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.30		0.07	0.03			
Total algal carbon (mg $C \cdot m^{-3}$)		57		44	52			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		13		8	11			4[b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only; not included in mean

Appendix Table 34. Physical, chemical and biological data from Bonilla Lake, Stn. 3, Oct. 28, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	10.0	9.9	9.8	9.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.3	3.2	3.4	4.3
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	130	142	138	192
Ammonia (µg $N \cdot L^{-1}$)	10	9	10	10
Nitrate (µg $N \cdot L^{-1}$)	8	8	8	9
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	3	4	5	5
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	3	3	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	380	380	380	380
Total dissolved solids (mg $\cdot L^{-1}$)	21.6		22.8	
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.53	1.48	1.20	1.52
Total chlorophyll (µg $\cdot L^{-1}$)	3.71	3.86	3.57	1.11
Total algal numbers ($x10^8 \cdot m^{-3}$)	97	126	113	
Total algal volume ($mm^3 \cdot m^{-3}$)	434	507	494	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	90	119	105	68[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	58	58	50	21[a]
Total algal carbon (mg $C \cdot m^{-3}$)	44	49	49	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	13	13	11	5[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 37. Physical, chemical and biological data from Curtis Lake Streams, March 28, 1981.

Stream	A	B	C
Surface temperature (^{o}C)		5.8	5.5
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.6	4.0	4.0
Particulate carbon (µg $C \cdot L^{-1}$)	1009	1085	644
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	116	101	105
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	5	19	28
Particulate nitrogen (µg $N \cdot L^{-1}$)	11	9	13
Total phosphorus (µg $P \cdot L^{-1}$)	1	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	480	390	430
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.89	0.80	1.04

Appendix Table 38. Physical, chemical and biological data from Curtis Lake, Stn. 1, April 29, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	6.2	6.1	6.0	5.5
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.1	2.4	2.1	4.6
Particulate carbon (µg $C \cdot L^{-1}$)	194	164	176	165
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	207	394	166	140
Ammonia (µg $N \cdot L^{-1}$)	5	4	4	4
Nitrate (µg $N \cdot L^{-1}$)	33	33	33	30
Particulate nitrogen (µg $N \cdot L^{-1}$)	30	27	32	<1
Total phosphorus (µg $P \cdot L^{-1}$)	3	4	4	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	2	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	2	2	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	400	400	400	400
Total dissolved solids ($mg \cdot L^{-1}$)			13.2	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.89	1.12	1.10	0.86
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.53	0.58	0.50	0.25
Total algal numbers ($x10^{8} \cdot m^{-3}$)	15	9	7	
Total algal volume ($mm^{3} \cdot m^{-3}$)	73	65	43	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	15	8	7	7[a]
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	61	43	41	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	14	11	8	
Nanoplankton (m.d.20µ) carbon ($mg\ C \cdot m^{-3}$)	12	9	8	<1[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 39. Physical, chemical and biological data from Curtis Lake, Stn. 2, April 29, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	6.5	6.4	6.4	6.3	6.2	6.1	6.0	5.7
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]	0.32	0.28	0.33	0.32	0.29	0.34	0.30	0.30
Dissolved organic carbon (mg $C \cdot L^{-1}$)		4.1		3.6	4.0			6.3
Particulate carbon (µg $C \cdot L^{-1}$)		192		200	199			389
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		172		142	139			154
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		33		33	33			32
Particulate nitrogen (µg $N \cdot L^{-1}$)		28		31	27			24
Total phosphorus (µg $P \cdot L^{-1}$)		5		4	4			5
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		2	4			2
Particulate phosphorus (µg $P \cdot L^{-1}$)		3		2	<1			3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		400		400	400			400
Total dissolved solids (mg $\cdot L^{-1}$)					14.1			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.01	0.94		0.85	0.97	1.03	1.23	0.94
Light bottle glucose turnover time (h)	157	67	157	93	81	56	100	882
Dark bottle glucose turnover time (h)		268		116	54			302
Total chlorophyll (µg $\cdot L^{-1}$)		0.85		0.87	0.93			0.25
Total algal numbers ($x10^8 \cdot m^{-3}$)		16		18	11			
Total algal volume ($mm^3 \cdot m^{-3}$)		123		90	70			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		16		17	11			1[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		79		77	55			<1[b]
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.51	0.40	0.45	0.34	0.09	0.02	0.01	0.00
Total algal carbon (mg $C \cdot m^{-3}$)		20		17	12			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		16		15	11			<1[b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only; not included in mean

Appendix Table 40. Physical, chemical and biological data from Curtis Lake, Stn. 3, April 29, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	6.6	6.4	6.2	5.5
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.6	4.1	3.5	3.5
Particulate carbon (µg $C \cdot L^{-1}$)	213	232	187	226
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	120	134	106	154
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	31	31	31	30
Particulate nitrogen (µg $N \cdot L^{-1}$)	28	33	22	21
Total phosphorus (µg $P \cdot L^{-1}$)	4	4	3	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	3	2	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	2	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	400	400	400	400
Total dissolved solids (mg $\cdot L^{-1}$)			13.8	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.95	1.00	0.91	0.83
Total chlorophyll (µg $\cdot L^{-1}$)	1.08	1.33	0.58	0.31
Total algal numbers ($x10^{8} \cdot m^{-3}$)	18	16	12	
Total algal volume ($mm^{3} \cdot m^{-3}$)	137	130	70	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	18	16	12	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	92	78	61	
Total algal carbon (mg $C \cdot m^{-3}$)	23	21	13	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	18	15	12	

Appendix Table 41. Physical, chemical and biological data from Curtis Lake Streams, April 29, 1981.

Stream	A	B	C
Surface temperature (°C)	7.0	6.8	7.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.3	3.5	3.7
Particulate carbon (µg $C \cdot L^{-1}$)	216	149	224
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	100	144	108
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	15	26	29
Particulate nitrogen (µg $N \cdot L^{-1}$)	24	15	36
Total phosphorus (µg $P \cdot L^{-1}$)	3	2	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	420	400	400
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.55	0.55	1.19

Appendix Table 42. Physical, chemical and biological data from Curtis Lake, Stn. 1, May 27, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	12.3	12.0	10.4	6.1
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.3	3.0	1.6	2.0
Particulate carbon (µg $C \cdot L^{-1}$)	300	323	344	230
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	136	100	100	91
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	5	4
Nitrate (µg $N \cdot L^{-1}$)	2	1	2	23
Particulate nitrogen (µg $N \cdot L^{-1}$)	50	59	64	33
Total phosphorus (µg $P \cdot L^{-1}$)	3	4	2	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	1	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	4	4	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	370	370	360	370
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.94	1.12	1.19	0.85
Total chlorophyll (µg $\cdot L^{-1}$)	3.20	3.20	3.26	0.50
Total algal numbers ($x10^8 \cdot m^{-3}$)	33	36	26	
Total algal volume ($mm^3 \cdot m^{-3}$)	1025	1174	574	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	18	19	17	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	77	88	84	
Total algal carbon (mg $C \cdot m^{-3}$)	106	123	61	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	15	18	17	

Appendix Table 43. Physical, chemical and biological data from Curtis Lake, Stn. 2, May 27, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	12.9	12.7	12.5	12.3	11.0	8.4	7.0	6.3
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.27	0.30	0.27	0.26	0.31	0.48	0.51	0.54
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.3		2.5	2.9			
Particulate carbon (µg $C \cdot L^{-1}$)		353		397	378			211
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		109		88	95			104
Ammonia (µg $N \cdot L^{-1}$)		5		4	4			<4
Nitrate (µg $N \cdot L^{-1}$)		9		6	6			24
Particulate nitrogen (µg $N \cdot L^{-1}$)		57		61	68			38
Total phosphorus (µg $P \cdot L^{-1}$)		6		5	5			2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		5		3	5			2
Particulate phosphorus (µg $P \cdot L^{-1}$)		8		6	6			3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		340		340	340			370
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.04	1.07		1.06	0.88	0.97	1.06	0.86
Light bottle glucose turnover time (h)	85	26	26	25	43	26	74	84
Dark bottle glucose turnover time (h)		67		88	98			190
Total chlorophyll (µg $\cdot L^{-1}$)		3.30		4.25	3.68			0.64
Total algal numbers ($\times 10^8 \cdot m^{-3}$)		37		46	39			
Total algal volume ($mm^3 \cdot m^{-3}$)		1215		1419	1188			
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)		19		26	21			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		120		124	114			
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	3.69	3.91	2.41	1.46	0.47	0.05	0.02	0.00
Total algal carbon (mg $C \cdot m^{-3}$)		130		149	128			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		23		25	22			

[a] values determined using the gas chromatograph (Stainton et al. 1977)

Appendix Table 44. Physical, chemical and biological data from Curtis Lake, Stn. 3, May 27, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.2	12.8	12.2	6.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.1	2.2	2.5	2.3
Particulate carbon (µg $C \cdot L^{-1}$)	375	346	300	170
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	85	99	77	87
Ammonia (µg $N \cdot L^{-1}$)	5	4	4	4
Nitrate (µg $N \cdot L^{-1}$)	5	6	7	26
Particulate nitrogen (µg $N \cdot L^{-1}$)	71	72	51	26
Total phosphorus (µg $P \cdot L^{-1}$)	5	6	4	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	3	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	6	7	6	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	330	340	340	370
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.82	0.97	0.97	1.04
Total chlorophyll (µg $\cdot L^{-1}$)	4.03	4.28	3.68	0.62
Total algal numbers ($x10^{8} \cdot m^{-3}$)	46	49	43	
Total algal volume ($mm^{3} \cdot m^{-3}$)	1309	1280	1214	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	25	28	24	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	138	132	120	
Total algal carbon (mg $C \cdot m^{-3}$)	148	146	136	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	27	26	24	

Appendix Table 45. Physical, chemical and biological data from Curtis Lake Streams, May 27, 1981.

Stream	A	B	C
Surface temperature (°C)	12.5	12.9	13.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.3	2.7	1.9
Particulate carbon (µg $C \cdot L^{-1}$)	223	149	345
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	129	82	70
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	5
Nitrate (µg $N \cdot L^{-1}$)	1	11	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)	34	24	68
Total phosphorus (µg $P \cdot L^{-1}$)	2	1	4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	<2	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	460	380	330
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.74	0.51	0.98

Appendix Table 46. Physical, chemical and biological data from Curtis Lake, Stn. 1, June 24, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	14.1	12.7	12.0	6.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.3	4.1		3.4
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)				
Ammonia (µg $N \cdot L^{-1}$)	<4	9	<4	10
Nitrate (µg $N \cdot L^{-1}$)	<1	6	3	24
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	7	5	4	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	4	3	3	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	6	4	3	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	320	380	390	400
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.39	1.14	1.27	0.76
Total chlorophyll (µg $\cdot L^{-1}$)	4.31	4.40	4.37	0.24
Total algal numbers ($x10^8 \cdot m^{-3}$)	300	159	157	
Total algal volume ($mm^3 \cdot m^{-3}$)	3391	1755	2555	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	261	140	128	4[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	118	88	72	1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	310	152	220	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	26	19	16	<1[a]

[a] ultraphytoplankton only

Appendix Table 47. Physical, chemical and biological data from Curtis Lake, Stn. 2, June 24, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	14.3	14.1	13.9	13.4	12.4	10.4	8.6	6.1
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.35	0.40	0.42	0.53	0.47	0.68	0.67	0.69
Dissolved organic carbon (mg $C \cdot L^{-1}$)		4.1		4.7	4.7			4.3
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		98		95	88			84
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			9
Nitrate (µg $N \cdot L^{-1}$)		<1		3	14			30
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		7		6	6			1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		5		5	4			3
Particulate phosphorus (µg $P \cdot L^{-1}$)		6		5	5			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		320		330	350			400
Total dissolved solids (mg $\cdot L^{-1}$)		10.5			12.6			
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.12	1.75		1.40	1.22	1.28	1.05	0.69
Light bottle glucose turnover time (h)	66	35	12	20	27	21	24	72
Dark bottle glucose turnover time (h)		23		30	96			
Total chlorophyll (µg $\cdot L^{-1}$)		3.29		4.65	6.65			0.29
Total algal numbers ($x10^{8} \cdot m^{-3}$)		255		212	233			
Total algal volume ($mm^{3} \cdot m^{-3}$)		6647		5911	3503			
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)		182		151	191			
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)		126		96	160			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	4.32	4.65	3.95	3.31	1.02	0.14	0.01	0.01
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.21		1.30	0.29			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.40		0.41	0.10			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		2.04		1.59	0.63			
Total algal carbon (mg $C \cdot m^{-3}$)		561		510	318			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		27		21	34			

[a] values determined using the gas chromatograph (Stainton et al. 1977)

Appendix Table 48. Physical, chemical and biological data from Curtis Lake, Stn. 3, June 24, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	14.0	13.0	12.4	6.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.1	4.2	4.6	3.4
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)				
Ammonia (µg $N \cdot L^{-1}$)	4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	3	<1	4	12
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	6	5	5	5
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	4	3	3	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	5	4	5	5
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	290	310	370	340
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.26	1.50	1.08	0.98
Total chlorophyll (µg $\cdot L^{-1}$)	4.65	7.29	5.32	3.20
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	386	279	209	
Total algal volume ($mm^3 \cdot m^{-3}$)	4951	4559	3904	
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	338	223	162	214[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	161	102	86	51[a]
Total algal carbon (mg $C \cdot m^{-3}$)	504	433	352	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	37	23	19	13[a]

[a] ultraphytoplankton only

Appendix Table 49. Physical, chemical and biological data from Curtis Lake Streams, June 24, 1981.

Stream	A	B	C
Surface temperature (°C)	13.8	13.2	14.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.0	1.5	4.4
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	142	130	88
Ammonia (µg $N \cdot L^{-1}$)	5	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	<1	8	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	2	1	4
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	2	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	4	<1	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	630	440	290
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.40	0.44	0.87

Appendix Table 50. Physical, chemical and biological data from Curtis Lake, Stn. 1, July 22, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	19.4	19.1	16.0	6.5
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.5	1.9	4.6	2.1
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	139	136	126	100
Ammonia (µg $N \cdot L^{-1}$)	5	4	9	7
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	24
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	13	13	11	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	4	3	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	8	6	12	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	30	40	74	380
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.36	1.98	0.94	0.37
Total chlorophyll (µg $\cdot L^{-1}$)	11.00	10.00	10.00	1.28
Total algal numbers ($x10^{8} \cdot m^{-3}$)	323	290	202	
Total algal volume ($mm^{3} \cdot m^{-3}$)	5588	4612	4612	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	256	233	144	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	224	191	130	
Total algal carbon (mg $C \cdot m^{-3}$)	482	402	379	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	48	40	28	

Appendix Table 51. Physical, chemical and biological data from Curtis Lake, Stn. 2, July 22, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	18.7	18.6	18.4	18.2	16.7	11.5	9.3	6.3
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.46	0.48	0.45	0.52	0.55	0.81	0.84	0.78
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.1		2.5	3.1			2.5
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		108		118	119			113
Ammonia (µg $N \cdot L^{-1}$)		9		5	5			10
Nitrate (µg $N \cdot L^{-1}$)		<1		<1	<1			23
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		9		11	8			2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		4		3	3			1
Particulate phosphorus (µg $P \cdot L^{-1}$)		7		9	11			<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		40		40	90			380
Total dissolved solids (mg $\cdot L^{-1}$)		20.5			15.7			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.02	1.28		1.42	1.30	1.54	0.45	0.68
Light bottle glucose turnover time (h)	16	17	16	20	19	51	42	501
Dark bottle glucose turnover time (h)		19		21	19			
Total chlorophyll (µg $\cdot L^{-1}$)		7.63		7.73	8.17			1.05
Total algal numbers ($x10^8 \cdot m^{-3}$)		321		308	162			7
Total algal volume ($mm^3 \cdot m^{-3}$)		4763		4654	4525			487
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		264		251	103			1
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		193		217	74			3
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	10.80	7.15	3.10	1.87	0.52	0.26	0.15	0.07
Fract. primary production 0.2-1.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0	0.54	0.18	0.01	0	0	0	
Fract. primary production 1.0-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	2.84	1.07	0.46	0.23	0.02	0	0.12	
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	2.03	1.40	0.60	0.38	0.04	0	0	0
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	6.06	4.14	1.85	1.25	0.54	0.68	0.22	0.11
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [b,c]	1.91							
pH [c]	5.9							
Total alkalinity (mg $\cdot L^{-1} CaCO_3$) [c]	1.81							
Total algal carbon (mg $C \cdot m^{-3}$)		418		409	364			38
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		42		47	16			1

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] values determined using the potentiometric method (APHA 1976)
[c] mean of two values

Appendix Table 52. Chemical and biological data from Curtis Lake, Stn. 2, July 22, 1981.

Depth (m)	0	1	2	3	4	5	6
Total phosphorus ($\mu g \cdot L^{-1}$)	11	9	11	11	10	8	6
Total chlorophyll ($\mu g \cdot L^{-1}$)	8.17	7.63	5.61	7.73	7.19	8.17	11.20
Total algal numbers ($x10^8 \cdot m^{-3}$)	210	321	310	308	238	162	184
Total algal volume ($mm^3 \cdot m^{-3}$)	2768	4763	3746	4654	2770	4525	7622
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	176	264	266	251	205	103	87
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	181	193	223	217	190	74	79
Total algal carbon (mg $C \cdot m^{-3}$)	247	418	328	409	245	364	589
Nanoplankton (m.d.20μ) carbon (mg $C \cdot m^{-3}$)	39	42	49	47	41	16	17

Depth (m)	7	8	9	10	11	12	13
Total phosphorus ($\mu g \cdot L^{-1}$)	6	6	5	3	3	3	3
Total chlorophyll ($\mu g \cdot L^{-1}$)	13.90	14.10	13.00	6.43	4.43	2.72	2.18
Total algal numbers ($x10^8 \cdot m^{-3}$)	207	144	95	42	33	27	13
Total algal volume ($mm^3 \cdot m^{-3}$)	8268	7673	3613	1690	2424	1546	936
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	106	44	51	18	3	9	2
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	73	42	39	12	13	9	5
Total algal carbon (mg $C \cdot m^{-3}$)	640	598	286	137	193	119	73
Nanoplankton (m.d.20μ) carbon (mg $C \cdot m^{-3}$)	16	9	9	3	3	2	1

Depth (m)	14	15	16	17	18	19	20
Total phosphorus ($\mu g \cdot L^{-1}$)	2	2	3	3	<1	2	2
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.87	1.13	1.84	1.72	1.48	1.34	1.05
Total algal numbers ($x10^8 \cdot m^{-3}$)	15	9	11	11	9	8	7
Total algal volume ($mm^3 \cdot m^{-3}$)	1054	643	790	792	817	559	487
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	3	2	3	2	<1	1	1
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	7	5	9	8	2	6	3
Total algal carbon (mg $C \cdot m^{-3}$)	79	49	63	61	61	44	38
Nanoplankton (m.d.20μ) carbon (mg $C \cdot m^{-3}$)	1	1	2	1	1	1	1

Appendix Table 53. Physical, chemical and biological data from Curtis Lake, Stn. 3, July 22, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	18.5	17.7	17.0	6.4
Dissolved organic carbon (mg $C \cdot L^{-1}$)	8.4	5.1	3.1	1.1
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	104	100	102	87
Ammonia (µg $N \cdot L^{-1}$)	8	9	6	11
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	26
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	7	4	8	8
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	3	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	6	6	9	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	60	60	80	390
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.54	1.44	1.11	0.59
Total chlorophyll (µg $\cdot L^{-1}$)	3.32	4.62	4.50	0.95
Total algal numbers ($x10^8 \cdot m^{-3}$)	299	197	236	
Total algal volume ($mm^3 \cdot m^{-3}$)	5591	4357	5262	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	227	143	170	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	128	124	128	
Total algal carbon (mg $C \cdot m^{-3}$)	454	359	426	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	28	27	28	

Appendix Table 54. Physical, chemical and biological data from Curtis Lake Streams, July 22, 1981.

Stream	A	B	C
Surface temperature (°C)		18.9	17.5
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.3	4.3	1.5
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	137	93	93
Ammonia (µg $N \cdot L^{-1}$)	7	5	4
Nitrate (µg $N \cdot L^{-1}$)	12	<1	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	4	3	15
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	9	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	710	30	90
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.36	1.76	1.58

Appendix Table 55. Physical, chemical and biological data from Curtis Lake, Stn. 1, August 26, 1981.

Depth (m)	1	3	5	20	62
Temperature (°C)	17.1	16.5	15.2	6.6	
Dissolved organic carbon (mg $C \cdot L^{-1}$)	5.0	4.0	2.7	6.7	3.8
Particulate carbon (µg $C \cdot L^{-1}$)					
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	182	126	118	133	80
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4	4
Nitrate (µg $N \cdot L^{-1}$)	6	4	3	22	29
Particulate nitrogen (µg $N \cdot L^{-1}$)					
Total phosphorus (µg $P \cdot L^{-1}$)	10	9	5	2	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	4	2	2	2	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	7	5	3	<1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	360	400	380	470	490
Total dissolved solids (mg $\cdot L^{-1}$)	15.3		13.1		
Bacteria numbers ($x10^6 \cdot ml$)	2.60	2.03	1.60	0.76	0.79
Total chlorophyll (µg $\cdot L^{-1}$)	4.23	2.69	1.45	1.16	0.69
Total algal numbers ($x10^8 \cdot m^{-3}$)	107	18[a]	86		4
Total algal volume ($mm^3 \cdot m^{-3}$)	1331	488[a]	360		118
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	92	12[a]	82		2
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	101	31[a]	40		1
Total algal carbon (mg $C \cdot m^{-3}$)	133	49[a]	36		10
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	21	7[a]	8		<1

[a] does not include ultraphytoplankton; not included in mean

Appendix Table 56. Physical, chemical and biological data from Curtis Lake, Stn. 2, Aug. 26, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20	61
Temperature (^{o}C)	16.7	16.6	16.5	16.4	16.2	13.5	11.4	6.5	
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]	0.64	0.61	0.78	0.71	0.66	0.95	0.97	0.87	
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.7		4.1	2.8			3.7	2.9
Particulate carbon (µg $C \cdot L^{-1}$)									
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		116		141	131			115	102
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4	12
Nitrate (µg $N \cdot L^{-1}$)		5		8	6			21	22
Particulate nitrogen (µg $N \cdot L^{-1}$)									
Total phosphorus (µg $P \cdot L^{-1}$)		6		9	6			2	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		5	2			1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)		5		5	5			<1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		290		310	340			530	490
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	2.59	1.83		2.79	2.73	1.36	0.91	0.81	0.54
Light bottle glucose turnover time (h)	31	34	25	17	17	56	69	589	
Dark bottle glucose turnover time (h)		23		21	25			1227	
Total chlorophyll (µg $\cdot L^{-1}$)		3.15		2.69	3.32			1.73	0.63
Total algal numbers ($x10^{8} \cdot m^{-3}$)		194		227	132				24
Total algal volume ($mm^{3} \cdot m^{-3}$)		981		1226	925				246
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)		182		213	121			11[b]	21
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)		85		92	83			1[b]	54
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	7.64	6.99	6.70	2.77	0.44	0.13	0.09	0.03	
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		2.50		1.24					
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.27		0.39					
Fract. primary production > 8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		3.22		1.14	0.18				
Total algal carbon (mg $C \cdot m^{-3}$)		92		108	87				27
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		18		20	18			<1[b]	12

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only

Appendix Table 57. Physical, chemical and biological data from Curtis Lake, Stn. 3, August 26, 1981.

Depth (m)	1	3	5	20	28
Temperature (°C)	16.9	16.5	16.2	6.4	
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.0	2.1	2.3	1.7	1.3
Particulate carbon (µg $C \cdot L^{-1}$)					
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	122	142	136	135	124
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4	4
Nitrate (µg $N \cdot L^{-1}$)	4	5	6	25	29
Particulate nitrogen (µg $N \cdot L^{-1}$)					
Total phosphorus (µg $P \cdot L^{-1}$)	6	6	6	2	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	2	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	3	5	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	300	310	320	500	500
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	2.54	1.62	0.72	1.48	0.55
Total chlorophyll (µg $\cdot L^{-1}$)	2.78	2.75	2.72	1.02	0.74
Total algal numbers ($x10^{8} \cdot m^{-3}$)	282	206	77		16
Total algal volume ($mm^{3} \cdot m^{-3}$)	1567	1335	1609		352
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	264	189	57	4[a]	12
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	154	94	79	1[a]	33
Total algal carbon (mg $C \cdot m^{-3}$)	148	121	136		32
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	32	20	16	<1[a]	7

[a]ultraphytoplankton only

Appendix Table 58. Physical, chemical and biological data from Curtis Lake Streams, August 26, 1981.

Stream	A	B	C
Surface temperature (^{o}C)	15.0	16.5	17.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.2	1.2	2.3
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	197	94	81
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	6
Nitrate (µg $N \cdot L^{-1}$)	3	7	2
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	2	4	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	3	4
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	860	550	250
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.18	0.86	2.14

Appendix Table 59. Physical, chemical and biological data from Curtis Lake, Stn. 1, September 22, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.5	13.4	13.3	7.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	5.2	5.4	5.2	5.4
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	194	130	130	104
Ammonia (µg $N \cdot L^{-1}$)	8	11	7	6
Nitrate (µg $N \cdot L^{-1}$)	9	9	9	23
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	5	5	6	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	3	3	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	2	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	490	490	490	390
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.75	1.56	1.72	0.78
Total chlorophyll (µg $\cdot L^{-1}$)	2.89	2.75	2.75	1.25
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	114	121	80	
Total algal volume ($mm^3 \cdot m^{-3}$)	237	236	269	
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	110	118	76	8[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	47	34	35	2[a]
Total algal carbon (mg $C \cdot m^{-3}$)	32	31	33	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	10	8	8	<1[a]

[a] ultraphytoplankton only

Appendix Table 60. Physical, chemical and biological data from Curtis Lake, Stn. 2, Sept. 22, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	13.9	13.8	13.7	13.6	13.4	13.2	12.9	6.5
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]	0.49	0.67	0.67	0.73	0.90	0.94	0.97	1.07
Dissolved organic carbon (mg $C \cdot L^{-1}$)		3.6		5.0	5.5			
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		142		149	171			94
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	5			6
Nitrate (µg $N \cdot L^{-1}$)		9		9	9			24
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		6		6	5			2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2		4	3			1
Particulate phosphorus (µg $P \cdot L^{-1}$)		3		2	1			<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		430		450	470			390
Total dissolved solids (mg $\cdot L^{-1}$)					28.2			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	2.32	1.68		1.53	1.53	1.32	1.36	1.18
Light bottle glucose turnover time (h)	52	86	26	63	72	28	31	142
Dark bottle glucose turnover time (h)		55		20	157			430
Total chlorophyll (µg $\cdot L^{-1}$)		3.83		3.76	2.21			1.33
Total algal numbers ($x10^8 \cdot m^{-3}$)		116		125	78			
Total algal volume ($mm^3 \cdot m^{-3}$)		249		273	186			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		113		122	75			5 [b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		39		56	39			1 [b]
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	3.07	2.57	1.04	0.35	0.10	0.07	0.05	0.01
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.26		0.20	0.06			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.42		0.02	0.00			
Fract. primary production > 8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.89		0.13	0.04			
Total algal carbon (mg $C \cdot m^{-3}$)		32		38	24			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		9		12	8			<1 [b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only

Appendix Table 61. Physical, chemical and biological data from Curtis Lake, Stn. 3, September 22, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.7	13.5	13.4	6.5
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.2	23.7	6.2	2.4
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	130	127	120	97
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	9
Nitrate (µg $N \cdot L^{-1}$)	4	16	9	26
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	6	6	5	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	3	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	3	3	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	430	430	430	380
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	1.37	1.51	1.63	0.76
Total chlorophyll (µg $\cdot L^{-1}$)	3.52	3.92	2.89	1.10
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	106	108	110	
Total algal volume ($mm^3 \cdot m^{-3}$)	261	302	303	
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	103	105	106	5[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	82	61	70	1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	37	39	38	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	17	13	14	<1[a]

[a] ultraphytoplankton only

Appendix Table 62. Physical, chemical and biological data from Curtis Lake Streams, September 22, 1981.

Stream	A	B	C
Surface temperature (°C)	13.0	13.3	13.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	7.5	3.8	4.9
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	176	143	111
Ammonia (µg $N \cdot L^{-1}$)	<4	50	4
Nitrate (µg $N \cdot L^{-1}$)	6	18	10
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	3	8	6
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	6	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	4	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	910	570	440
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.19	0.92	2.26

Appendix Table 63. Physical, chemical and biological data from Curtis Lake, Stn. 1, Oct. 27, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	9.6	9.5	9.4	7.4
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.5		1.5	1.5
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	121	119	163	128
Ammonia (µg $N \cdot L^{-1}$)	11	8	9	10
Nitrate (µg $N \cdot L^{-1}$)	15	15	16	19
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	3	2	4	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	3	3	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	500	500	500	480
Total dissolved solids ($mg \cdot L^{-1}$)	18.0		18.9	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.31	1.61	1.79	1.19
Total chlorophyll ($\mu g \cdot L^{-1}$)	3.00	2.55	2.37	1.73
Total algal numbers ($x10^{8} \cdot m^{-3}$)	44	59	44	
Total algal volume ($mm^3 \cdot m^{-3}$)	175	168	178	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	41	56	41	21[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	46	53	41	5[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	21	21	21	
Nanoplankton (m.d.20µ) carbon ($mg\ C \cdot m^{-3}$)	9	11	9	1[a]

[a] ultraphytoplankton only

Appendix Table 64. Physical, chemical and biological data from Curtis Lake, Stn. 2, Oct. 27, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	10.0	10.0	9.9	9.8	9.8	9.6	9.5	9.0
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]	0.60	0.61	0.58	0.70	0.82	0.83	0.66	0.84
Dissolved organic carbon (mg $C \cdot L^{-1}$)		1.7		1.5	1.2			5.7
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		135		115	127			128
Ammonia (µg $N \cdot L^{-1}$)		11		9	10			15
Nitrate (µg $N \cdot L^{-1}$)		16		16	16			25
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		2		3	3			2
Particulate phosphorus (µg $P \cdot L^{-1}$)		3		3	2			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		490		480	560			410
Total dissolved solids (mg $\cdot L^{-1}$)		18.9			17.2			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.31	1.40		1.76	1.38	1.73	1.68	0.92
Light bottle glucose turnover time (h)	156	57	65	204	37	37	95	324
Dark bottle glucose turnover time (h)		52		70	87			122
Total chlorophyll (µg $\cdot L^{-1}$)		1.87		1.73	1.77			0.37
Total algal numbers ($x10^8 \cdot m^{-3}$)		65		30	28			
Total algal volume ($mm^3 \cdot m^{-3}$)		241		227	133			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		62		26	26			4[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		50		39	34			<1[b]
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.24	0.71	0.30	0.19	0.05	0.03	0.08	0.02
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.21		0.12	0.02			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.18		0.01	0.01			
Fract. primary production > 8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.32		0.06	0.02			
Total algal carbon (mg $C \cdot m^{-3}$)		27		24	16			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		11		7	7			<1[b]

[a] values determined using the gas chromatograph (Stainton et al. 1977)
[b] ultraphytoplankton only; not included in mean

Appendix Table 65. Physical, chemical and biological data from Curtis Lake, Stn. 3, Oct. 27, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	9.6	9.5	9.4	7.5
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.7	1.5	2.3	2.2
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	126	113	111	128
Ammonia (µg $N \cdot L^{-1}$)	12	11	11	14
Nitrate (µg $N \cdot L^{-1}$)	16	16	17	29
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	1	2	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	3	3	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	490	480	490	390
Total dissolved solids ($mg \cdot L^{-1}$)	18.8		17.7	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.04	1.13	1.03	0.89
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.55	1.64	1.57	0.63
Total algal numbers ($x10^{8} \cdot m^{-3}$)	48	43	46	
Total algal volume ($mm^{3} \cdot m^{-3}$)	181	196	235	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	46	41	42	11[a]
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	45	42	30	3[a]
Total algal carbon ($mg \cdot m^{-3}$)	21	23	23	
Nanoplankton (m.d.20µ) carbon ($mg \cdot m^{-3}$)	9	9	6	1[a]

[a]ultraphytoplankton only; not included in mean

Appendix Table 66. Physical, chemical and biological data from Curtis Lake Streams, October 27, 1981.

Stream	A	B	C
Surface temperature (°C)	8.7	8.4	10.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.1	2.3	3.2
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	120	108	98
Ammonia (µg $N \cdot L^{-1}$)	4	6	15
Nitrate (µg $N \cdot L^{-1}$)	6	15	18
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	4
Particulate phosphorus (µg $P \cdot L^{-1}$)	2		2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	870	870	480
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.96	0.92	1.37

Appendix Table 67. Physical, chemical and biological data from Eden Lake, Mar. 25, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	5.7	5.7	5.6	5.4
Dissolved organic nitrogen (μg $N \cdot L^{-1}$)	121	93	104	125
Ammonia (μg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (μg $N \cdot L^{-1}$)	64	64	65	77
Total phosphorus (μg $P \cdot L^{-1}$)	3	3	3	4
Total dissolved phosphorus (μg $P \cdot L^{-1}$)	3	3	3	3
Soluble reactive silicon (μg $Si \cdot L^{-1}$)	2000	1990	1990	1960
Total chlorophyll (μg $\cdot L^{-1}$)	0.63	0.52	0.46	0.22
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	4	2	4	
Total algal volume ($mm^3 \cdot m^{-3}$)	24	35	26	
Nanoplankton (m.d.20μ) numbers ($\times 10^8 \cdot m^{-3}$)	4	2	4	
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	15	14	13	
Total algal carbon (mg $C \cdot m^{-3}$)	4	5	4	
Nanoplankton (m.d.20μ) carbon (mg $C \cdot m^{-3}$)	3	3	2	

Appendix Table 68. Physical, chemical and biological data from Eden Lake, July 21, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	18.0	17.7	17.0	7.0
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	193	158	172	154
Ammonia ($\mu g \cdot L^{-1}$)	8	5	6	<4
Nitrate ($\mu g \cdot L^{-1}$)	29	27	26	59
Total phosphorus ($\mu g \cdot L^{-1}$)	6	4	4	<1
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	2	3	2	2
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	2030	2030	2040	1990
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.29	1.20	1.26	0.32
Total algal numbers ($\times 10^{8} \cdot m^{-3}$)	6	8	5	
Total algal volume ($mm^{3} \cdot m^{-3}$)	103	179	100	
Nanoplankton (m.d.20μ) numbers ($\times 10^{8} \cdot m^{-3}$)	5	6	5	
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	38	34	30	
Total algal carbon ($mg\ C \cdot m^{-3}$)	13	24	14	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	6	7	5	

Appendix Table 69. Physical, chemical and biological data from Great Central Lake, Stn. 1, Mar. 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	7.5	6.2	5.9	5.5
Particulate Carbon (µg $C \cdot L^{-1}$)	170	150	143	122
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	147	73	80	115
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	22	22	23	27
Particulate nitrogen (µg $N \cdot L^{-1}$)	47	26	28	16
Total phosphorus (µg $P \cdot L^{-1}$)	<1	1	1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)				
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	950	940	940	940
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.59	0.92	0.76	1.10
Total Chlorophyll (µg $\cdot L^{-1}$)	0.63	1.15	1.52	0.85
Total algal numbers ($x10^8 \cdot m^{-3}$)	350	378	396	
Total algal volume ($mm^3 \cdot m^{-3}$)	473	524	408	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	346	373	393	319[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	66	76	71	21[a]
Total algal carbon (mg $C \cdot m^{-3}$)	45	52	40	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	15	15	16	5[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 70. Physical, chemical and biological data from Great Central Lake, Stn. 2, Mar. 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	7.5	6.4	5.9	5.2
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	156	145	150	129
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	109	66	53	52
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	24	21	22	25
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	23	22	19	20
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	1	1	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)				
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	910	860	890	980
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.46	0.80	1.00	0.76
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.59	1.19	1.47	0.58
Total algal numbers ($x10^{8} \cdot m^{-3}$)	225	256	347	194
Total algal volume ($mm^{3} \cdot m^{-3}$)	474	312	358	373
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	221	253	344	191
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	69	59	69	52
Total algal carbon ($mg\ C \cdot m^{-3}$)	44	33	37	34
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	13	12	14	11

Appendix Table 71. Physical, chemical and biological data from Great Central Lake, Stn. 1, April 8, 1981

Depth (m)	1	3	5	20
Temperature (°C)	8.2	8.2	8.1	7.3
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	211	258	264	2520
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	78	73	74	77
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	12	12	13	17
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	19	28	58	35
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	2	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<2	<2	<2	<2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	860	860	860	880
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.31	0.36	0.30	0.34
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.99	3.48	3.32	1.85
Total algal numbers ($x10^8 \cdot m^{-3}$)	219	219	178	
Total algal volume ($mm^3 \cdot m^{-3}$)	1895	2009	1819	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	202	202	163	257[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	74	135	95	16[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	170	181	176	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	15	20	14	4[a]

[a]ultraphytoplankton only; not included in mean

Appendix Table 72. Physical, chemical and biological data from Great Central Lake, Stn. 2, April 4, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	7.6	7.2	7.0	6.3
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	138	148	135	801
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	96	86	73	86
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	22	22	22	22
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	22	24	25	23
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	2	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	3	3
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<2	<2	<2	<2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	890	880	890	890
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.43	0.37	0.52	0.39
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.50	1.60	1.76	1.47
Total algal numbers ($x10^8 \cdot m^{-3}$)	170	162	195	172
Total algal volume ($mm^3 \cdot m^{-3}$)	781	658	558	1190
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	163	156	190	160
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	38	35	33	47
Total algal carbon ($mg\ C \cdot m^{-3}$)	73	58	49	98
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	7	7	7	9

Appendix Table 73. Physical, chemical and biological data from Great Central Lake, Stn. 1, May 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	12.4	12.0	10.7	6.1
Particulate Carbon (µg $C \cdot L^{-1}$)	288	264	253	101
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	79	82	86	47
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	2	2	2	29
Particulate nitrogen (µg $N \cdot L^{-1}$)	42	46	39	17
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	2	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	820	830	840	950
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.73	0.64	0.64	0.65
Total Chlorophyll (µg $\cdot L^{-1}$)	0.95	1.01	1.46	0.68
Total algal numbers ($x10^8 \cdot m^{-3}$)	616	437	525	
Total algal volume ($mm^3 \cdot m^{-3}$)	4091	5507	4424	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	578	386	484	97[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	80	95	122	8[a]
Total algal carbon (mg $C \cdot m^{-3}$)	323	422	354	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	17	20	26	2[a]

[a] ultraphytoplankton only

Appendix Table 74. Physical, chemical and biological data from Great Central Lake, Stn. 2, May 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	12.3	12.0	11.4	6.7
Particulate Carbon (µg $C \cdot L^{-1}$)	247	224	152	229
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	119	92	83	89
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	1	2	2	21
Particulate nitrogen (µg $N \cdot L^{-1}$)	36	29	22	33
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	3	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	850	850	840	930
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.64	0.64	0.89	0.55
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.04	1.37	1.83	1.38
Total algal numbers ($x10^8 \cdot m^{-3}$)	777	496	545	17[a]
Total algal volume ($mm^3 \cdot m^{-3}$)	4678	4184	5179	1120[a]
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	733	458	496	7[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	156	101	115	30[a]
Total algal carbon (mg $C \cdot m^{-3}$)	381	339	413	93[a]
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	36	21	25	6[a]

[a]does not include ultraphytoplankton

Appendix Table 75. Physical, chemical and biological data from Great Central Lake, Stn. 1, Jure 10, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	14.8	14.7	14.5	6.8
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	228	235	240	117
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	108	136	108	131
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	5
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	1	33
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	51	32	49	26
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	1	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	650	660	660	991
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.70	0.71	0.88	0.77
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.95	1.01	1.01	1.52
Total algal numbers ($x10^{8} \cdot m^{-3}$)	82	65	82	
Total algal volume ($mm^{3} \cdot m^{-3}$)	5921	6201	5571	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	26	8	31	166[a]
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	52	47	37	13[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	430	442	395	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	10	9	8	3[a]

[a] ultraphytoplankton only

Appendix Table 76. Physical, chemical and biological data from Great Central Lake, Stn. 2, June 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	14.8	14.4	14.2	7.3
Particulate Carbon (µg $C \cdot L^{-1}$)	282	252	266	174
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	149	157	125	130
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	2	1	1	16
Particulate nitrogen (µg $N \cdot L^{-1}$)	52	45	45	35
Total phosphorus (µg $P \cdot L^{-1}$)	<1	1	1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	670	680	670	980
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.77	0.82	0.80	0.76
Total Chlorophyll (µg $\cdot L^{-1}$)	1.84	1.90	1.65	2.98
Total algal numbers ($x10^8 \cdot m^{-3}$)	92	206	113	384
Total algal volume ($mm^3 \cdot m^{-3}$)	5301	6164	7024	2982
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	47	146	45	357
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	70	68	59	41
Total algal carbon (mg $C \cdot m^{-3}$)	374	449	510	219
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	13	14	12	8

Appendix Table 77. Physical, chemical and biological data from Great Central Lake, Stn. 1, July 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.2	17.1	17.1	6.5
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	66	86	61	58
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	1	1	2	21
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	470	470	470	900
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.93	0.86	0.93	0.75
Total Chlorophyll (µg $\cdot L^{-1}$)	1.05	0.99	1.10	4.05
Total algal numbers ($x10^8 \cdot m^{-3}$)	73	69	54	
Total algal volume ($mm^3 \cdot m^{-3}$)	3404	3173	3789	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	41	38	18	249[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	23	36	40	18[a]
Total algal carbon (mg $C \cdot m^{-3}$)	249	234	275	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	4	8	8	4[a]

[a] ultraphytoplankton only

Appendix Table 78. Physical, chemical and biological data from Great Central Lake, Stn. 2, July 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	16.9	17.0	16.6	7.0
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	80	86	67	63
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	6
Nitrate (µg $N \cdot L^{-1}$)	2	1	2	16
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	2	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	440	440	440	850
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.77	0.97	1.05	0.78
Total Chlorophyll (µg $\cdot L^{-1}$)	1.80	1.80	1.90	6.49
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	68	89	65	287
Total algal volume ($mm^3 \cdot m^{-3}$)	4268	5162	4257	2771
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	29	41	25	261
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	28	48	60	57
Total algal carbon (mg $C \cdot m^{-3}$)	314	374	313	206
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	6	9	11	11

Appendix Table 79. Physical, chemical and biological data from Great Central Lake, Stn. 1, Aug. 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	24.2	23.4	21.9	7.1
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	59	64	54	71
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	1	<1	1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<2	<2	<2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	500	500	500	770
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.90	0.80	0.75	0.71
Total Chlorophyll (µg $\cdot L^{-1}$)	0.54	0.57	0.67	4.43
Total algal numbers ($x10^8 \cdot m^{-3}$)	29	10	225	
Total algal volume ($mm^3 \cdot m^{-3}$)	80	124	194	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	28	10	224	708[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	45	41	52	40[a]
Total algal carbon (mg $C \cdot m^{-3}$)	14	16	22	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	9	8	11	10[a]

[a] ultraphytoplankton only

Appendix Table 80. Physical, chemical and biological data from Great Central Lake, Stn. 2, Aug. 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	23.4	23.2	23.0	7.4
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	62	61	66	51
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	1	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<2	2	<2	<2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	480	480	480	730
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.69	0.64	0.99	0.66
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.93	1.04	0.83	5.00
Total algal numbers ($x10^{8} \cdot m^{-3}$)	354	269	141	627
Total algal volume ($mm^{3} \cdot m^{-3}$)	166	173	78	6856
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	353	268	140	564
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	88	54	34	63
Total algal carbon ($mg\ C \cdot m^{-3}$)	27	20	12	492
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	20	12	7	13

Appendix Table 81. Physical, chemical and biological data from Great Central Lake, Stn. 2, Aug. 20, 1981.

Depth (m)	0	1	2	3	4	5	6	7
Temperature (°C)	22.3	22.3	22.3	22.3	22.3	22.3	22.3	19.8
Buoyancy frequency ($\cdot s^{-2}$)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.073
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)		140		140		138		
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4	<4	6	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1	<1	<1	<1	<1
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)								
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	3	3	3	3	3	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	580	560	530	540	550	560	570	620
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.44	1.87	1.67	1.75	2.28	1.67	1.08	1.23
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.95	0.97	0.92	0.77	0.92	1.13	1.46	1.49
Total algal numbers ($x10^8 \cdot m^{-3}$)	364	358	505	417	452	284	391	391
Total algal volume ($mm^3 \cdot m^{-3}$)	150	276	427	436	212	169	252	386
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	363	357	504	416	452	283	390	390
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	64	62	89	73	85	69	57	64
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.30	1.56	1.55	1.42	1.25	1.16	0.91	1.15
pH	7.2	7.4		7.4		7.4		
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)	13.2	13.2		13.2		13.2		
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	3.64	3.44		3.47		3.45		
Total algal carbon ($mg\ C \cdot m^{-3}$)	24	31	51	48	28	23	25	35
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	15	13	21	15	18	15	12	14

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 81. Cont'd.

Depth (m)	8	9	10	11	12	13	14	15
Temperature (°C)	18.3	17.2	15.1	12.7	12.0	10.5	9.8	8.7
Buoyancy frequency ($\cdot s^{-2}$)	0.054	0.044	0.058	0.057	0.028	0.039	0.025	0.029
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)								
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	12	<4	<4	<4	15
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1	<1	<1	<1	<1
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)								
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	4	2	2	2	3	1	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	670	640	610	630	580	600	610	600
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.29	1.03	1.36	1.50	0.91	0.90	1.22	1.32
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.38	1.48	1.16	1.18	0.18	0.29	1.58	1.53
Total algal numbers ($x10^8 \cdot m^{-3}$)	692	653	723	452	383	451	495	528
Total algal volume ($mm^3 \cdot m^{-3}$)	253	348	300	322	112	230	323	363
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	690	651	721	451	382	450	493	525
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	77	84	73	65	60	56	56	51
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.95	0.69	0.70	0.58	0.43	0.34	0.22	0.27
pH			7.3					7.1
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)			12.1					12.1
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			3.45					3.53
Total algal carbon ($mg\ C \cdot m^{-3}$)	28	34	30	32	16	22	31	36
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	16	18	16	14	12	11	12	12

[a]values determined using the potentiometric method (APHA 1976)

Appendix Table 81. Cont'd.

Depth (m)	16	17	18	19	20	21	22	23
Temperature (°C)	8.4	7.9	7.2	6.8	6.4	6.2	6.0	5.9
Buoyancy frequency ($\cdot s^{-2}$)	0.014	0.017	0.019	0.013	0.013	0.008	0.008	0.006
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)					107			
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1	2	<1	3	14
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)								
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	2	2	2	2	2	2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	640	700	710	710	970	790	820	890
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.42	1.04	1.21	0.69	1.00	1.14	1.36	0.82
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.98	3.86	3.74	3.12	3.44	4.00	5.04	4.94
Total algal numbers ($x10^8 \cdot m^{-3}$)	475	421	528	407	400	513	467	579
Total algal volume ($mm^3 \cdot m^{-3}$)	398	465	422	839	1067	901	1228	1165
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	472	417	524	400	390	505	455	569
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	43	43	44	37	21	32	33	33
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.22	0.19	0.17	0.17	0.36	0.23	0.11	0.15
pH					7.0			
Total alkalinity ($mg \cdot L^{-1}\ CaCO_3$)					11.2			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]					3.51			
Total algal carbon ($mg\ C \cdot m^{-3}$)	35	39	36	63	80	68	91	86
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	10	10	10	8	5	8	8	8

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 81. Cont'd.

Depth (m)	24	25	26	27	28	29	30	47
Temperature (°C)	5.8	5.7	5.5	5.4	5.3	5.3	5.2	
Buoyancy frequency ($\cdot s^{-2}$)	0.005	0.005	0.007	0.005	0.005	0.000	0.004	
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								38
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4	<4	<4	<4
Ammonia ($\mu g\ N \cdot L^{-1}$)	17	26	32	35	35	38	39	50
Nitrate ($\mu g\ N \cdot L^{-1}$)								
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	2	2	1	2	1	1	2	2
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	900	930	950	960	980	970	980	1020
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1.15	0.88	0.58	0.58	0.77	0.54	0.95	0.69
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	3.94	3.24	4.08	2.29	2.63	1.79	1.53	0.21
Total chlorophyll ($\mu g \cdot L^{-1}$)	230	150	113	55	55	55	18	3
Total algal numbers ($x10^8 \cdot m^{-3}$)	1012	836	949	597	614	565	320	237
Total algal volume ($mm^3 \cdot m^{-3}$)	220	143	105	49	51	51	15	<1
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	14	15	9	8	11	17	8	2
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	0.15	0.04	0.02	0.00	0.00	0.00	0.02	
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)		6.9					6.9	
pH		11.0					11.7	
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)		3.62					3.90	
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]	73	60	67	44	41	39	24	17
Total algal carbon ($mg\ C \cdot m^{-3}$)	3	3	2	2	2	2	1	<1
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)								

[a]values determined using the potentiometric method (APHA 1976)

Appendix Table 82. Physical, chemical and biological data from Great Central Lake, Stn. 1, Sept. 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	19.8	19.6	19.4	8.0
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	182	95	128	127
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	1	1	3	2
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	2	3	2	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	2	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	3	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	510	510	490	670
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.48	1.12	2.10	1.01
Total Chlorophyll (µg $\cdot L^{-1}$)	1.21	0.98	0.92	2.27
Total algal numbers ($x10^8 \cdot m^{-3}$)	630	492	589	
Total algal volume ($mm^3 \cdot m^{-3}$)	243	506	310	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	628	490	587	290[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	64	56	89	14[a]
Total algal carbon (mg $C \cdot m^{-3}$)	30	49	36	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	14	13	20	4[a]

[a] ultraphytoplankton only

Appendix Table 83. Physical, chemical and biological data from Great Central Lake, Stn. 2, Sept. 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	19.9	19.7	19.4	7.4
Particulate Carbon ($\mu g \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	123	147	152	184
Ammonia ($\mu g \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g \cdot L^{-1}$)	1	1	1	2
Particulate nitrogen ($\mu g \cdot L^{-1}$)				
Total phosphorus ($\mu g \cdot L^{-1}$)	3	4	4	2
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	2	1	2	1
Particulate phosphorus ($\mu g \cdot L^{-1}$)	2	3	3	2
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	460	460	460	720
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.92	1.66	2.00	1.05
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.98	1.54	1.84	4.29
Total algal numbers ($x10^8 \cdot m^{-3}$)	968	712	368	522
Total algal volume ($mm^3 \cdot m^{-3}$)	638	581	521	7308
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	963	708	364	449
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	147	80	55	49
Total algal carbon ($mg \cdot m^{-3}$)	73	57	48	529
Nanoplankton (m.d.20μ) carbon ($mg \cdot m^{-3}$)	35	19	12	11

Appendix Table 84. Physical, chemical and biological data from Great Central Lake, Stn. 1, Oct. 17, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.4	13.3	13.2	6.9
Particulate Carbon ($\mu g \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	170	125	98	117
Ammonia ($\mu g \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g \cdot L^{-1}$)	<1	<1	<1	10
Particulate nitrogen ($\mu g \cdot L^{-1}$)				
Total phosphorus ($\mu g \cdot L^{-1}$)	2	4	2	2
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	<1	<1	<1	
Particulate phosphorus ($\mu g \cdot L^{-1}$)	1	1	2	1
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	520	520	520	790
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.02	1.11	1.16	0.96
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.57	2.71	3.78	2.33
Total algal numbers ($x10^8 \cdot m^{-3}$)	422	508	569	
Total algal volume ($mm^3 \cdot m^{-3}$)	614	975	454	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	415	500	563	113[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	99	118	98	11[a]
Total algal carbon ($mg \cdot m^{-3}$)	65	100	51	
Nanoplankton (m.d.20μ) carbon ($mg \cdot m^{-3}$)	22	26	22	3[a]

[a] ultranhytoplankton only

Appendix Table 85. Physical, chemical and biological data from Great Central Lake, Stn. 2, Oct. 17, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.7	13.5	13.4	7.2
Particulate Carbon ($\mu g \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	87	83	106	117
Ammonia ($\mu g \cdot L^{-1}$)	<4	<4	<4	7
Nitrate ($\mu g \cdot L^{-1}$)	<1	<1	<1	<1
Particulate nitrogen ($\mu g \cdot L^{-1}$)				
Total phosphorus ($\mu g \cdot L^{-1}$)	2	4	2	2
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g \cdot L^{-1}$)	1	1	1	1
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	520	520	510	650
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.32	0.95	1.05	1.10
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.07	1.77	2.14	1.67
Total algal numbers ($x10^8 \cdot m^{-3}$)	425	725	645	191
Total algal volume ($mm^3 \cdot m^{-3}$)	1006	719	787	1227
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	418	717	637	178
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	170	189	176	45
Total algal carbon ($mg\ C \cdot m^{-3}$)	116	91	90	95
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	38	42	40	10

Appendix Table 86. Physical, chemical and biological data from Henderson Lake, March 12, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	8.1	7.6	7.3	6.9
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	88	110	99	74
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	65	59	83	53
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	29	24	27	29
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	16	18	14	12
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	1	2	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	580	580	590	570
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.20	0.92	1.04	0.71
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.30	0.54	0.66	0.31
Total algal numbers ($x10^{8} \cdot m^{-3}$)	31	5	7	
Total algal volume ($mm^{3} \cdot m^{-3}$)	94	30	60	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	30	4	6	
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	72	12	20	
Total algal carbon ($mg\ C \cdot m^{-3}$)	17	3	6	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	15	2	3	

Appendix Table 87. Physical, chemical and biological data from Henderson Lake, April 8, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.8	8.7	8.6	7.8
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	98	134	131	88
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	57	119	57	108
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	28	27	28	28
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	18	22	30	25
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	5	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	500	500	500	500
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.77	0.82	0.82	0.68
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.73	1.28	1.14	0.30
Total algal numbers ($x10^8 \cdot m^{-3}$)	10	7	10	
Total algal volume ($mm^3 \cdot m^{-3}$)	32	52	59	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	10	7	10	11[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	18	38	27	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	4	6	7	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	3	5	4	<1[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 88. Physical, chemical and biological data from Henderson Lake, May 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	10.9	10.8	10.6	8.8
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	245	247	261	156
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	64	81	96	79
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	20	19	20	26
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	39	40	36	16
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	6	6	3
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	3	3	3
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	4	4	4	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	500	500	500	560
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.67	1.31	0.98	0.97
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.19	2.57	2.28	1.08
Total algal numbers ($x10^8 \cdot m^{-3}$)	106	137	98	
Total algal volume ($mm^3 \cdot m^{-3}$)	601	716	681	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	103	134	95	12[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	324	343	357	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	67	75	73	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	42	46	44	<1[a]

[a] ultraphytoplankton only

Appendix Table 89. Physical, chemical and biological data from Henderson Lake, June 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.6	13.5	13.4	8.8
Particulate Carbon (µg $C \cdot L^{-1}$)	305	308	326	102
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	134	130	111	104
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	5
Nitrate (µg $N \cdot L^{-1}$)	2	2	2	27
Particulate nitrogen (µg $N \cdot L^{-1}$)	67	50	68	24
Total phosphorus (µg $P \cdot L^{-1}$)	3	3	3	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	<1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	330	340	340	360
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.65	1.62	1.34	0.65
Total Chlorophyll ($\mu g \cdot L^{-1}$)	4.18	4.44	4.50	1.01
Total algal numbers ($x10^8 \cdot m^{-3}$)	735	974	342	
Total algal volume ($mm^3 \cdot m^{-3}$)	3002	2841	2725	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	720	962	320	11[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	77	101	110	1[a]
Total algal carbon (mg $C \cdot m^{-3}$)	187	178	196	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	16	22	20	<1[a]

[a] ultraphytoplankton only

Appendix Table 90. Physical, chemical and biological data from Henderson Lake, July 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	16.5	16.4	16.3	9.1
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	79	90	95	65
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	<4	5	8	8
Ammonia ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	22
Nitrate ($\mu g\ N \cdot L^{-1}$)				
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	3	4	4	2
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	3	3	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	3	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)				
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	<10	<10	<10	460
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	2.62	2.03	2.35	1.44
Total Chlorophyll ($\mu g \cdot L^{-1}$)	3.42	3.42	3.80	2.44
Total algal numbers ($x10^8 \cdot m^{-3}$)	294	327	314	
Total algal volume ($mm^3 \cdot m^{-3}$)	2159	2360	2501	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	275	308	293	56[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	71	91	109	12[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	161	173	189	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	16	20	24	3[a]

[a] ultraphytoplankton only

Appendix Table 91. Physical, chemical and biological data from Henderson Lake, Aug. 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	22.2	21.9	21.4	15.0
Particulate Carbon ($\mu g \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	75	101	89	64
Ammonia ($\mu g \cdot L^{-1}$)	<4	<4	6	11
Nitrate ($\mu g \cdot L^{-1}$)	<1	<1	<1	29
Particulate nitrogen ($\mu g \cdot L^{-1}$)				
Total phosphorus ($\mu g \cdot L^{-1}$)	3	3	4	1
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	2	3	3	1
Particulate phosphorus ($\mu g \cdot L^{-1}$)	3	4	4	<2
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	50	50	50	480
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	2.11	1.04	1.47	0.99
Total Chlorophyll ($\mu g \cdot L^{-1}$)	3.23	3.70	3.07	1.00
Total algal numbers ($x10^8 \cdot m^{-3}$)	100	116	69	
Total algal volume ($mm^3 \cdot m^{-3}$)	247	332	275	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	99	113	68	18[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	185	207	173	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	44	55	43	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	38	43	35	<1[a]

[a] ultraphytoplankton only

Appendix Table 92. Physical, chemical and biological data from Henderson Lake, Sept. 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	18.5	18.4	18.3	8.9
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	158	194	174	123
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	8
Nitrate (µg $N \cdot L^{-1}$)	1	4	2	36
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	5	5	5	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	3	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	5	3	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	50	40	30	480
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.61	1.48	1.33	1.36
Total Chlorophyll (µg $\cdot L^{-1}$)	4.85	9.80	7.29	0.90
Total algal numbers ($x10^8 \cdot m^{-3}$)	106	141	163	
Total algal volume ($mm^3 \cdot m^{-3}$)	920	537	811	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	102	139	160	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	102	98	134	
Total algal carbon (mg $C \cdot m^{-3}$)	88	61	83	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	21	21	28	

Appendix Table 93. Physical, chemical and biological data from Henderson Lake, Oct. 17, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	13.9	13.4	13.0	11.6
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	94	109	94	93
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	6	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	14	14	14	36
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	280	280	280	450
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	2.00	1.57	1.32	1.18
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.64	2.18	2.86	1.22
Total algal numbers ($x10^{8} \cdot m^{-3}$)	546	430	458	
Total algal volume ($mm^{3} \cdot m^{-3}$)	593	706	517	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	542	424	454	105[a]
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	122	114	105	13[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	79	95	74	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	25	24	21	3[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 94. Physical, chemical and biological data from Hobiton Lake, March 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.4	8.1	7.7	6.7
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	195	168	198	136
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	103	66	92	89
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	23	25	26	33
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	32	26	26	21
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1110	1130	1120	1120
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.98	0.98	1.47	0.82
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.57	1.95	2.21	0.96
Total algal numbers ($x10^8 \cdot m^{-3}$)	24	56	28	
Total algal volume ($mm^3 \cdot m^{-3}$)	128	128	116	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	24	55	27	8[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	22	40	22	<1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	13	15	11	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	5	8	4	<1[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 95. Physical, chemical and biological data from Hobiton Lake, April 8, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.5	8.4	8.3	7.3
Particulate Carbon ($\mu g \cdot L^{-1}$)	217	238	205	157
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	78	92	80	72
Ammonia ($\mu g \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g \cdot L^{-1}$)	16	16	16	30
Particulate nitrogen ($\mu g \cdot L^{-1}$)	38	30	35	25
Total phosphorus ($\mu g \cdot L^{-1}$)	2	4	3	3
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	3	3	3	4
Particulate phosphorus ($\mu g \cdot L^{-1}$)	<2	<2	<2	<2
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	1080	1060	1080	1120
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.62	0.85	0.62	0.74
Total Chlorophyll ($\mu g \cdot L^{-1}$)	3.25	3.28	3.15	0.71
Total algal numbers ($x10^8 \cdot m^{-3}$)	100	101	92	
Total algal volume ($mm^3 \cdot m^{-3}$)	154	244	215	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	99	99	91	50[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	67	66	62	3[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	21	28	24	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	14	13	12	1[a]

[a] ultraphytoplankton only

Appendix Table 96. Physical, chemical and biological data from Hobiton Lake, May 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	11.8	11.5	11.2	7.5
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	154	266	251	248
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	101	96	91	92
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	10	10	10	30
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	19	41	43	36
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	7	5	3
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	4	2	3
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	4	6	5	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1080	1080	1080	1150
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.07	1.83	1.04	1.41
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.81	1.74	1.91	0.55
Total algal numbers ($x10^{8} \cdot m^{-3}$)	261	365	395	
Total algal volume ($mm^{3} \cdot m^{-3}$)	528	309	544	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	258	363	392	20[a]
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	112	104	118	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	55	41	57	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	23	22	24	<1[a]

[a] ultraphytoplankton only

Appendix Table 97. Physical, chemical and biological data from Hobiton Lake, June 10, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	14.6	14.4	14.1	7.4
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	221	279	230	110
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	106	132	101	137
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	3	3	3	41
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	33	52	45	27
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	2	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	2
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1000	1010	1010	1160
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.56	1.09	1.75	0.76
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.94	1.91	1.75	0.50
Total algal numbers ($x10^{8} \cdot m^{-3}$)	759	433	398	
Total algal volume ($mm^{3} \cdot m^{-3}$)	439	353	183	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	756	431	397	20[a]
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	74	84	46	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	59	43	20	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	17	18	10	<1[a]

[a] ultraphytoplankton only

Appendix Table 98. Physical, chemical and biological data from Hobiton Lake, July 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.0	16.6	16.1	7.3
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	83	81	82	83
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	12
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	2	4	3	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	2	2	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1070	1070	1080	1100
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.75	0.68	0.64	0.67
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.78	2.82	3.39	2.21
Total algal numbers ($x10^8 \cdot m^{-3}$)	765	451	391	
Total algal volume ($mm^3 \cdot m^{-3}$)	3070	2668	3644	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	742	431	363	450[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	94	87	57	23[a]
Total algal carbon (mg $C \cdot m^{-3}$)	405	341	469	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	22	19	13	6[a]

[a] ultraphytoplankton only

Appendix Table 99. Physical, chemical and biological data from Hobiton Lake, August 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	23.1	22.4	19.0	8.5
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	92	86	108	83
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	38
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	3	2	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	3	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	3	<2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	940	950	1000	1130
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.41	0.96	1.18	0.67
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.44	2.47	2.50	0.59
Total algal numbers ($x10^8 \cdot m^{-3}$)	664	425	476	
Total algal volume ($mm^3 \cdot m^{-3}$)	433	850	687	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	662	422	472	17[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	146	407	89	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	57	116	69	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	30	79	19	<1[a]

[a] ultraphytoplankton only

Appendix Table 100. Physical, chemical and biological data from Hobiton Lake, Sept. 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	18.7	18.4	18.2	7.6
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	106	127	154	99
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	1	2	48
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	5	6	4	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	4	3	3	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	860	840	880	1130
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.71	2.39	2.32	1.11
Total Chlorophyll ($\mu g \cdot L^{-1}$)	3.04	3.55	3.69	0.84
Total algal numbers ($x10^8 \cdot m^{-3}$)	375	289	226	
Total algal volume ($mm^3 \cdot m^{-3}$)	1478	2211	1751	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	364	272	213	11[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	94	142	117	1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	168	259	205	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	20	32	25	<1[a]

[a] ultraphytoplankton only

Appendix Table 101. Physical, chemical and biological data from Hobiton Lake, Oct. 17, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	12.9	12.7	12.5	7.9
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	138	105	183	120
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	5	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	48
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	4	3	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	2	2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1030	1040	1030	1160
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.76	1.14	1.30	0.87
Total Chlorophyll ($\mu g \cdot L^{-1}$)	2.50	3.78	3.21	0.85
Total algal numbers ($x10^8 \cdot m^{-3}$)	564	534	564	
Total algal volume ($mm^3 \cdot m^{-3}$)	825	653	594	
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	558	530	559	13[a]
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	118	124	115	2[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	84	73	67	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	24	25	23	1[a]

[a] ultraphytoplankton only

Appendix Table 102. Physical, chemical and biological data from Ian Lake, Stn. 1, Mar. 25, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	5.8	5.8	5.8	5.7
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	94	138	124	132
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	41	40	40	40
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	3	2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1640	1630	1630	1630
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.41	0.32	0.32	0.34
Total algal numbers ($x10^{8} \cdot m^{-3}$)	2	2	1	
Total algal volume ($mm^{3} \cdot m^{-3}$)	31	30	27	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	1	2	1	2[a]
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	7	19	12	<1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	4	4	3	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	1	3	2	<1[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 103. Physical, chemical and biological data from Ian Lake, Stn. 2, Mar. 25, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	6.0	6.0	5.9	5.8
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	155	142	129	113
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	45	45	45	45
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	4	5	3	4
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	3	3	3	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1550	1550	1540	1540
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.22	<0.12	<0.12	<0.12
Total algal numbers ($\times 10^{8} \cdot m^{-3}$)	4	4	4	
Total algal volume ($mm^{3} \cdot m^{-3}$)	11	17	11	
Nanoplankton (m.d.20μ) numbers ($\times 10^{8} \cdot m^{-3}$)	4	4	4	2[a]
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	9	16	10	<1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	2	3	2	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	2	3	2	<1[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 104. Physical, chemical and biological data from Ian Lake, Stn. 1, July 21, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	16.2	16.1	16.0	8.9
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	222	212	172	178
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	6
Nitrate ($\mu g\ N \cdot L^{-1}$)	23	22	22	34
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	2	1	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1680	1670	1670	1680
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.72	1.56	1.26	0.34
Total algal numbers ($x10^{8} \cdot m^{-3}$)	19	11	10	
Total algal volume ($mm^{3} \cdot m^{-3}$)	582	391	370	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	16	9	8	
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	103	80	50	
Total algal carbon ($mg\ C \cdot m^{-3}$)	69	35	30	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	19	14	9	

Appendix Table 105. Physical, chemical and biological data from Ian Lake, Stn. 2, July 21, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	16.4	16.4	16.3	9.2
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	175	177	188	176
Ammonia ($\mu g\ N \cdot L^{-1}$)	4	4	<4	4
Nitrate ($\mu g\ N \cdot L^{-1}$)	22	22	22	38
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1580	1560	1580	1560
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.37	1.70	1.49	0.37
Total algal numbers ($x10^{8} \cdot m^{-3}$)	13	15	11	
Total algal volume ($mm^{3} \cdot m^{-3}$)	640	131	563	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	10	15	9	
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	76	85	64	
Total algal carbon ($mg\ C \cdot m^{-3}$)	46	22	40	
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	14	15	11	

Appendix Table 106. Physical, chemical and biological data from Kennedy Lake, Stn. 1, March 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.4	7.9	7.8	7.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.9	6.3	3.0	3.8
Particulate carbon (µg $C \cdot L^{-1}$)	92	98	92	90
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	81	62	95	84
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	41	40	40	43
Particulate nitrogen (µg $N \cdot L^{-1}$)	12	19	18	15
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	1	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	820	820	820	820
Total dissolved solids ($mg \cdot L^{-1}$)			22.7	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.89		0.65	0.76
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.71	1.39	1.39	0.40
Total algal numbers ($x10^{8} \cdot m^{-3}$)	8	14	16	
Total algal volume ($mm^{3} \cdot m^{-3}$)	28	148	63	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	8	13	16	1[a]
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	16	54	27	<1[a]
Total algal carbon ($mg\ C \cdot m^{-3}$)	4	17	8	
Nanoplankton (m.d.20µ) carbon ($mg\ C \cdot m^{-3}$)	3	10	5	<1[a]

[a] ultraphytoplankton only

Appendix Table 107. Physical, chemical and biological data from Kennedy Lake, Stn. 2, March 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.1	7.7	7.4	7.1
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.0	4.6	4.3	3.6
Particulate carbon (µg $C \cdot L^{-1}$)	96	88	95	113
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	65	101	100	91
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	33	34	34	34
Particulate nitrogen (µg $N \cdot L^{-1}$)	15	14	17	10
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	<1	1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	740	740	740	740
Total dissolved solids ($mg \cdot L^{-1}$)			16.8	
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.16	1.03	1.25	1.04
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.81	0.83	0.67	0.54
Total algal numbers ($x10^8 \cdot m^{-3}$)	65	175	45	
Total algal volume ($mm^3 \cdot m^{-3}$)	57	228	37	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	65	171	45	51[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	33	37	26	7[a]
Total algal carbon (mg $C \cdot m^{-3}$)	8	24	6	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	7	8	5	2[a]

[a] ultraphytoplankton only; not included in mean

Appendix Table 108. Physical, chemical and biological data from Kennedy Lake Streams, March 12, 1981.

Stream	A	B	C
Surface temperature (°C)	7.3	7.1	8.1
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.4	2.7	5.9
Particulate carbon (µg $C \cdot L^{-1}$)	58	112	120
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	161	71	178
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	30	29	30
Particulate nitrogen (µg $N \cdot L^{-1}$)	5	7	15
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1020	1010	790
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.42	0.40	1.01

Appendix Table 109. Physical, chemical and biological data from Kennedy Lake, Stn. 1, April 9, 1981.

Depth (m)	0	1	3	5	7.5	10	20	30
Temperature (°C)	8.8							
pH		6.6			6.6			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]		5.31			5.31			
Dissolved organic carbon (mg $C \cdot L^{-1}$)		1.4	2.7	3.0			2.7	
Particulate carbon (µg $C \cdot L^{-1}$)		180	176	155			158	
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		72	64	58			59	
Ammonia (µg $N \cdot L^{-1}$)		<4	<4	<4			<4	
Nitrate (µg $N \cdot L^{-1}$)		30	33	36			34	
Particulate nitrogen (µg $N \cdot L^{-1}$)		28	31	25			17	
Total phosphorus (µg $P \cdot L^{-1}$)		2	2	2			2	
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2	2	2			1	
Particulate phosphorus (µg $P \cdot L^{-1}$)		1	1	1			<1	
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		740	740	740			770	
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.70	0.89		1.10	0.89	0.88	0.89	1.01
Light bottle glucose turnover time (h)	1017	405	292	276	363	218	512	>10,000
Dark bottle glucose turnover time (h)		230	788	320			675	
Total chlorophyll (µg $\cdot L^{-1}$)		3.19	3.32	2.31			0.79	
Total algal numbers ($x10^8 \cdot m^{-3}$)		18	14	20				
Total algal volume ($mm^3 \cdot m^{-3}$)		326	335	216				
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		16	11	18			5[b]	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		49	38	47			1[b]	
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	3.94	2.41	2.20	1.12	0.38	0.17	0.07	0.00
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.72	1.54	0.82				
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.69	0.66	0.30				
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)		12.79			12.48			
Total algal carbon (mg $C \cdot m^{-3}$)		32	32	22				
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		9	7	9			<1[b]	

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only; not included in mean

Appendix Table 110. Physical, chemical and biological data from Kennedy Lake, Stn. 2, April 9, 1981.

Depth (m)	0	1	3	5	7.5	10	20	30
Temperature (°C)	8.6							
pH					6.4			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]					4.53			
Dissolved organic carbon (mg $C \cdot L^{-1}$)		3.0	2.7	2.9			3.7	
Particulate carbon (µg $C \cdot L^{-1}$)		160	157	152			151	
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		67	105	93			73	
Ammonia (µg $N \cdot L^{-1}$)		<4	<4	<4			<4	
Nitrate (µg $N \cdot L^{-1}$)		27	25	26			29	
Particulate nitrogen (µg $N \cdot L^{-1}$)		27	20	22			28	
Total phosphorus (µg $P \cdot L^{-1}$)		1	2	1			2	
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2	1	2			2	
Particulate phosphorus (µg $P \cdot L^{-1}$)		2	2	2			2	
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		650	660	660			660	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.79	1.09		1.01	1.01	0.97	0.73	0.85
Light bottle glucose turnover time (h)	1237	407	178	223	310	553	326	1412
Dark bottle glucose turnover time (h)		277	244	835			247	
Total chlorophyll (µg $\cdot L^{-1}$)		1.86	1.86	1.34			0.94	
Total algal numbers ($\times 10^8 \cdot m^{-3}$)		147	85	144				
Total algal volume ($mm^3 \cdot m^{-3}$)		110	97	91				
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)		146	85	143			113[b]	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		67	33	60			19[b]	
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.47	1.62	1.38	0.82	0.09	0.00	0.00	0.00
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.80	1.23	0.50				
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.82	0.15	0.32				
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)					8.98			
Total algal carbon (mg $C \cdot m^{-3}$)		18	12	15				
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		15	7	13			5[b]	

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only; not included in mean

Appendix Table III. Physical, chemical and biological data from Kennedy Lake Streams, April 9, 1981.

Stream	A	B	C
Surface temperature (°C)	8.0	6.5	8.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.0	2.7	3.2
Particulate carbon (µg $C \cdot L^{-1}$)	107	73	156
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	71	68	68
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	44	21	29
Particulate nitrogen (µg $N \cdot L^{-1}$)	29	12	17
Total phosphorus (µg $P \cdot L^{-1}$)	2	<1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	<2	<2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	910	870	720
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.46	0.30	1.01

Appendix Table 112. Physical, chemical and biological data from Kennedy Lake, Stn. 1, May 14, 1981.

Depth (m)	0	1	3	5	7.5	10	20	30
Temperature (°C)	12.2	12.2	12.1	12.0	10.7	9.7	8.0	7.6
pH		7.1			7.0			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]		4.05			4.10			
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.8	2.8	3.0			2.9	
Particulate carbon (µg $C \cdot L^{-1}$)		346	319	349			119	
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		82	74	100			100	
Ammonia (µg $N \cdot L^{-1}$)		<4	<4	<4			<4	
Nitrate (µg $N \cdot L^{-1}$)		7	7	8			42	
Particulate nitrogen (µg $N \cdot L^{-1}$)		62	53	60			16	
Total phosphorus (µg $P \cdot L^{-1}$)		4	4	1			2	
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		2	2	2			<1	
Particulate phosphorus (µg $P \cdot L^{-1}$)		5	6	5			3	
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		670	670	670			820	
Total dissolved solids (mg $\cdot L^{-1}$)		18.9		18.3				
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.95	0.98		0.92	0.79	0.70	0.92	0.88
Light bottle glucose turnover time (h)	215	190	59	77	141	328	564	295
Dark bottle glucose turnover time (h)		46	8548	102			2255	
Total chlorophyll (µg $\cdot L^{-1}$)		4.25	4.63	4.47			0.79	
Total algal numbers ($x10^8 \cdot m^{-3}$)		179	178	166				
Total algal volume ($mm^3 \cdot m^{-3}$)		4380	3181	3089				
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		135	140	135			1[b]	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		439	204	219			<1[b]	
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	8.13	5.37	2.55	0.70	0.48	0.18	0.00	0.00
Total alkalinity (mg $\cdot L^{-1}$ $CaCO_3$)		13.22			13.22			
Total algal carbon (mg $C \cdot m^{-3}$)		381	272	259				
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		81	40	41			<1[b]	

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only

Appendix Table 113. Physical, chemical and biological data from Kennedy Lake, Stn. 2, May 14, 1981.

Depth (m)	0	1	3	5	7.5	10	20	30
Temperature (°C)	12.0	12.0	11.8	11.5	11.2	10.8	8.7	8.6
pH					6.8			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]					3.30			
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.9	3.2	2.9			2.8	
Particulate carbon (µg $C \cdot L^{-1}$)		159	162	209			109	
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		68	76	119			95	
Ammonia (µg $N \cdot L^{-1}$)		<4	<4	<4			<4	
Nitrate (µg $N \cdot L^{-1}$)		23	23	23			27	
Particulate nitrogen (µg $N \cdot L^{-1}$)		23	29	28			12	
Total phosphorus (µg $P \cdot L^{-1}$)		1	1	<1			<1	
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1	<1	1			<1	
Particulate phosphorus (µg $P \cdot L^{-1}$)		2	2	2			2	
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		710	720	710			730	
Total dissolved solids (mg $\cdot L^{-1}$)		13.1		25.0				
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.49	0.57		0.65	0.46	0.49	0.82	0.68
Light bottle glucose turnover time (h)	1945	1546	982	5042	1228	1394	2253	371
Total chlorophyll (µg $\cdot L^{-1}$)		1.49	1.35	1.59			0.35	
Total algal numbers ($x10^8 \cdot m^{-3}$)		195	211	236				
Total algal volume ($mm^3 \cdot m^{-3}$)		273	342	338				
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		194	209	234			54[b]	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		144	130	176			7[b]	
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.68	1.43	0.00	0.36	0.00	0.07	0.00	0.00
Total alkalinity (mg $\cdot L^{-1}$ $CaCO_3$)					9.36			
Total algal carbon (mg $C \cdot m^{-3}$)		40	47	53				
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		29	27	38			2[b]	

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only

Appendix Table 114. Physical, chemical and biological data from Kennedy Lake Streams, May 14, 1981.

Stream	A	B	C
Surface temperature (°C)	8.8	9.6	12.1
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.4	2.1	2.5
Particulate carbon (µg $C \cdot L^{-1}$)	68	114	285
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	83	122	100
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	32	20	18
Particulate nitrogen (µg $N \cdot L^{-1}$)	12	22	29
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1020	910	710
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.31	0.31	0.70

Appendix Table 115. Physical, chemical and biological data from Kennedy Lake, Stn. 1, June 11, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	15.2	14.9	14.6	14.3	12.3	10.7	9.8	8.0
pH			7.6			7.3		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			3.54			3.97		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		1.5		1.9	1.6			2.5
Particulate carbon (µg $C \cdot L^{-1}$)		112		121	148			128
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		5		<4	<4			5
Ammonia (µg $N \cdot L^{-1}$)		1		1	3			42
Nitrate (µg $N \cdot L^{-1}$)								
Particulate nitrogen (µg $N \cdot L^{-1}$)		4		4	4			1
Total phosphorus (µg $P \cdot L^{-1}$)		<1		<1	1			1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		480		480	600			820
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		23.3			30.6			
Total dissolved solids (mg $\cdot L^{-1}$)	1.90	1.81		2.26	1.64	1.29	1.32	0.79
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	26	20	14	15	16	55	93	592
Light bottle glucose turnover time (h)		3.75		3.90	4.25			0.58
Total chlorophyll (µg $\cdot L^{-1}$)		370		289	198			
Total algal numbers ($x10^8 \cdot m^{-3}$)		1406		1323	985			
Total algal volume ($mm^3 \cdot m^{-3}$)		353		277	189			36[b]
Nanoplankton (n.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		169		175	106			4[b]
Nanoplankton (n.d.20µ) volume ($mm^3 \cdot m^{-3}$)	3.01	4.13	4.20	4.79	2.08	0.16	0.00	0.00
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		4.11		3.48	2.08			
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.02		1.31	0.00			
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)			13.75			14.60		
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)		130		119	86			
Total algal carbon (mg $C \cdot m^{-3}$)		36		37	22			1[b]
Nanoplankton (n.d.20µ) carbon (mg $C \cdot m^{-3}$)								

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only

Appendix Table 116. Physical, chemical and biological data from Kennedy Lake, Stn. 2, June 11, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	14.4	14.3	14.3	14.2	14.1	14.0	12.7	8.9
pH			7.3			7.2		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]			2.65			2.87		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.6		2.6	2.7			4.3
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (ug $N \cdot L^{-1}$)		129		126	151			109
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		15		15	15			28
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		1		2	2			<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		1		<1	1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		730		580	720			790
Total dissolved solids (mg $\cdot L^{-1}$)		24.1			23.7			
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.77	0.62		0.68	0.59	0.59	0.71	0.79
Light bottle glucose turnover time (h)	2112	164	110	105	94	62	549	166
Total chlorophyll (µg $\cdot L^{-1}$)		1.64		1.61	1.60			0.28
Total algal numbers ($\times 10^8 \cdot m^{-3}$)		350		184	263			
Total algal volume ($mm^3 \cdot m^{-3}$)		831		790	669			
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)		343		179	259			54[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		91		104	121			11[b]
Total primary production 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.91	1.10	1.10	1.23	0.22	0.00	0.00	0.00
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.57		0.39	0.16			
Fract. primary production 3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.53		0.84	0.06			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			9.73			10.26		
Total algal carbon (mg $C \cdot m^{-3}$)		94		100	86			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		21		22	26			3[b]

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only

Appendix Table 117. Physical, chemical and biological data from Kennedy Lake Streams, June 11, 1981.

Stream	A	B	C
Surface temperature (°C)	9.2	10.4	14.6
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.0	1.7	2.9
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	83	90	137
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	25	16	9
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	2	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	930	840	720
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.58	0.54	0.92

Appendix Table 118. Physical, chemical and biological data from Kennedy Lake, Stn. 1, July 8, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	18.2	18.2	18.2	18.1	18.0	11.4	10.2	7.9
pH			7.2			6.9		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			3.98			4.73		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.2		2.2	2.1			1.8
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		109		110	87			85
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		1		1	1			47
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		6		6	6			6
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		1	2			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		3		3	3			1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		80		80	70			800
Total dissolved solids (mg $\cdot L^{-1}$)		24.4			28.0			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.07	1.81		1.31	1.10	1.74	1.15	0.92
Light bottle glucose turnover time (h)	51	55	28	18	50	33	49	216
Dark bottle glucose turnover time (h)		382		565	7141			>10,000
Total chlorophyll (µg $\cdot L^{-1}$)		3.93		3.55	3.96			0.44
Total algal numbers ($x10^8 \cdot m^{-3}$)		287		222	306			
Total algal volume ($mm^3 \cdot m^{-3}$)		2063		2043	4342			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		250		190	232			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		188		126	230			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	8.73	6.27	3.84	1.38	0.83	0.44	0.78	0.11
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.89		0.31	0.00			
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		5.38		1.07	1.02			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			14.47			14.47		
Total algal carbon (mg $C \cdot m^{-3}$)		202		185	391			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		40		25	48			

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 119. Physical, chemical and biological data from Kennedy Lake, Stn. 2, July 8, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	18.0	18.0	18.0	17.8	17.4	17.0	10.3	8.8
pH			6.8			7.0		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]			3.15			3.20		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.3		2.2	2.1			3.7
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		115		67	99			91
Ammonia (µg $N \cdot L^{-1}$)		<4		6	4			10
Nitrate (µg $N \cdot L^{-1}$)		5		5	6			28
Particulate nitrogen (µg $N \cdot L^{-1}$)		5		5	6			28
Total phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		1		<1	<1			<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		690		700	700			700
Total dissolved solids (mg $\cdot L^{-1}$)		14.1			25.3			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.43	0.53		0.51	0.72	0.61	0.72	0.86
Light bottle glucose turnover time (h)	817	2749	143	406	1384	99	274	184
Dark bottle glucose turnover time (h)		297		112	1012			217
Total chlorophyll (µg $\cdot L^{-1}$)		1.27		1.40		1.28		<0.10
Total algal numbers ($x10^8 \cdot m^{-3}$)		152		113		142		
Total algal volume ($mm^3 \cdot m^{-3}$)		891		617		673		
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		147		109		137		14[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		72		70		73		5[b]
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	2.66	1.59	1.42	0.72	0.30	0.05	0.39	0.00
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.43		0.48	0.00			
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.16		0.24	0.54			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			9.61			10.73		
Total algal carbon (mg $C \cdot m^{-3}$)		111		79	87			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		14		16	16			1[b]

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only

Appendix Table 120. Physical, chemical and biological data from Kennedy Lake Streams, July 8, 1981.

Stream	A	B	C
Surface temperature (°C)	13.3	15.6	16.1
Dissolved organic carbon (mg $C \cdot L^{-1}$)	0.9	1.3	0.6
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	95	73	122
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	16
Nitrate (µg $N \cdot L^{-1}$)	27	20	6
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1100	1100	610
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.25	0.50	0.76

Appendix Table 121. Physical, chemical and biological data from Kennedy Lake, Stn. 1, Aug. 12, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20	90
Temperature (°C)	25.3	25.1	24.8	23.0	18.8	11.6	10.3	8.3	
pH			9.0			7.0			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			2.56			4.60			
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.2		2.8	3.3			1.6	1.4
Particulate carbon (µg $N \cdot L^{-1}$)									
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		161		175	205			109	89
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4	4
Nitrate (µg $N \cdot L^{-1}$)		6		6	<1			49	69
Particulate nitrogen (µg $N \cdot L^{-1}$)									
Total phosphorus (µg $P \cdot L^{-1}$)		6		6	5			<1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		1	2			<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		6		4	4			<2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		30		30	<10			800	820
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.18	1.57		1.62	1.66	1.80	1.09	0.64	0.35
Light bottle glucose turnover time (h)	133	70	150	314	108	119	131	617	
Dark bottle glucose turnover time (h)		1523		348	1360			>10,000	
Total chlorophyll (µg $\cdot L^{-1}$)		11.4		12.5	17.1			0.85	0.18
Total algal numbers ($x10^8 \cdot m^{-3}$)		2175		1456	2031				<1
Total algal volume ($mm^3 \cdot m^{-3}$)		1430		1934	3249				17
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		2048		1263	1855				<1
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		284		201	238				2
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	14.24	20.65	20.53	13.53	5.11	1.57	0.86	0.21	
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.30		0.00	0.11				
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.95		1.21	0.48				
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		17.40		12.38	4.52				
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			10.60			14.60			
Total algal carbon (mg $C \cdot m^{-3}$)		230		296	382				2
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		63		44	53				<1

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 122. Physical, chemical and biological data from Kennedy Lake, Stn. 2, Aug. 12, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20	77
Temperature (°C)	24.8	24.6	24.4	24.2	23.0	18.2	13.7	9.0	
pH			7.0			7.1			
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]			2.87			2.93			
Dissolved organic carbon (mg $C \cdot L^{-1}$)		1.6		2.0	1.8			4.8	1.1
Particulate carbon (µg $N \cdot L^{-1}$)									
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		83		88	121			103	85
Ammonia (µg $N \cdot L^{-1}$)		4		<4	<4			<4	<4
Nitrate (µg $N \cdot L^{-1}$)		<1		<1	<1			32	40
Particulate nitrogen (µg $N \cdot L^{-1}$)									
Total phosphorus (µg $P \cdot L^{-1}$)		<1		1	<1			<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		<2		<2	<2			<2	
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		710		710	710			710	720
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.43	0.35		0.38	0.38	0.53	0.63	1.00	0.49
Light bottle glucose turnover time (h)	1334	545	452	448	187	289	311	753	
Dark bottle glucose turnover time (h)		1532		>10,000	330			2177	
Total chlorophyll (µg $\cdot L^{-1}$)		1.03		1.06	1.23			0.25	0.15
Total algal numbers ($x10^8 \cdot m^{-3}$)		157		16	106				1
Total algal volume ($mm^3 \cdot m^{-3}$)		232		405	219				29
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		155		12	105				1
Nanoplankton (m.d.20µ) volume ($mm3 \cdot m^{-3}$)		80		54	52				6
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.36	0.50	0.00	1.47	0.78	0.66	0.54	0.09	
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.00		0.00	0.57				
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.00		1.10	.20				
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.97		1.09	0.00				
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			9.98			10.10			
Total algal carbon (mg $C \cdot m^{-3}$)		33		44	26				4
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		17		10	10				1

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 123. Physical, chemical and biological data from Kennedy Lake Streams, August 12, 1981.

Stream	A	B	C
Surface temperature (°C)	22.8	24.0	25.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	0.9	1.6	2.3
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	65	128	146
Ammonia (µg $N \cdot L^{-1}$)	4	4	<4
Nitrate (µg $N \cdot L^{-1}$)	3	22	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<2	<2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1300	1200	550
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.30	0.79	0.85

Epi Depth = 7.2 m
Comp z = 2.4 m

Appendix Table 124. Physical, chemical and biological data from Kennedy Lake, Stn. 1, Sept. 11, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	20.1	19.8	19.5	19.2	17.5	13.2	10.0	8.1
pH			9.4			9.7		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			3.48			3.35		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		4.4		5.4				2.3
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		492		460	241			126
Ammonia (µg $N \cdot L^{-1}$)		<4		5	41			<4
Nitrate (µg $N \cdot L^{-1}$)		19		18	13			58
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		14		13	6			1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		5		8	3			1
Particulate phosphorus (µg $P \cdot L^{-1}$)		12		9	7			1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		230		190	230			770
Total dissolved solids (mg $\cdot L^{-1}$)		34.3			33.3			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	2.45	4.99		3.43	3.21		1.08	0.36
Light bottle glucose turnover time (h)	358	433	268	240	160	1648	106	283
Dark bottle glucose turnover time (h)		289		3133	82			>10,000
Total chlorophyll (µg $\cdot L^{-1}$)		53.3		51.2	15.2			0.44
Total algal numbers ($x10^8 \cdot m^{-3}$)		354		530	80			
Total algal volume ($mm^3 \cdot m^{-3}$)		1715		2540	290			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		17		28	28			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		24		17	28			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	38.78	62.85	32.70	5.52	0.01	2.12	1.49	1.58
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		3.07		0.17	0.00			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.20		0.00	0.00			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		59.59		5.66	0.23			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			14.47			13.97		
Total algal carbon (mg $C \cdot m^{-3}$)		351		521	59			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		4		3	6			

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 125. Physical, chemical and biological data from Kennedy Lake, Stn. 2, Sept. 11, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	18.9	18.8	18.6	18.5	18.2	17.3	14.1	8.9
pH			7.6			7.5		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.3		2.3	2.6			2.6
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		92		162	114			106
Ammonia (µg $N \cdot L^{-1}$)		<4		8	<4			4
Nitrate (µg $N \cdot L^{-1}$)		2		5	4			34
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		2		2	2			1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		1		1	1			1
Particulate phosphorus (µg $P \cdot L^{-1}$)		2		3	2			1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		680		680	680			690
Total dissolved solids (mg $\cdot L^{-1}$)		32.7			26.5			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.63	0.65		0.61	0.42	1.93	1.29	0.97
Light bottle glucose turnover time (h)	131	149	131	188	159	377	166	461
Dark bottle glucose turnover time (h)		95		94	108			343
Total chlorophyll (µg $\cdot L^{-1}$)		1.52		1.78	2.47			0.46
Total algal numbers ($x10^8 \cdot m^{-3}$)		375		530	325			
Total algal volume ($mm^3 \cdot m^{-3}$)		251		343	461			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		373		528	323			35[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		95		105	181			2[a]
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.22	1.03	0.56	1.11	0.79	0.72	0.32	0.14
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.61		0.17	0.16			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.13		0.36	0.15			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.29		0.58	0.48			
Total algal carbon (mg $C \cdot m^{-3}$)		31		41	57			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		18		21	35			<1[a]

[a] ultraphytoplankton only

Appendix Table 126. Physical, chemical and biological data from Kennedy Lake Streams, September 9, 1981.

Stream	A	B	C
Surface temperature (°C)	17.9	18.2	21.7
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.0	2.0	3.1
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	104	112	129
Ammonia (µg $N \cdot L^{-1}$)	10	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	66	57	3
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1200	1150	620
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.60	0.75	1.67

Appendix Table 127. Physical, chemical and biological data from Kennedy Lake, Stn. 1, Oct. 20, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	12.1	11.9	11.8	11.7	11.5	11.2	10.9	9.1
pH			7.1			6.9		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			4.21			4.50		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		4.6		5.6	2.3			2.7
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		149		150	171			178
Ammonia (µg $N \cdot L^{-1}$)		6		5	14			12
Nitrate (µg $N \cdot L^{-1}$)		43		44	45			65
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		8		3	4			2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		1		3	3			1
Particulate phosphorus (µg $P \cdot L^{-1}$)		1		2	<1			1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		600		600	600			730
Total dissolved solids (mg $\cdot L^{-1}$)		24.5			20.5			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.45	1.44		2.38	2.27	2.42	0.70	0.93
Light bottle glucose turnover time (h)	178	36	82	35	55	66	33	213
Dark bottle glucose turnover time (h)		202		73	30			393
Total chlorophyll (µg $\cdot L^{-1}$)		4.29		4.64	5.07			2.14
Total algal numbers ($x10^8 \cdot m^{-3}$)		56		48	61			
Total algal volume ($mm^3 \cdot m^{-3}$)		277		228	325			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)		6		9	4			5[b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		15		17	19			2[b]
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.79	2.97	1.70	1.36	1.51	0.59	0.00	0.50
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.55		0.00	0.00			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.05		0.01	0.52			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.37		1.40	1.52			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			14.00			13.75		
Total algal carbon (mg $C \cdot m^{-3}$)		55		46	64			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		3		3	3			<1[b]

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only

Appendix Table 128. Physical, chemical and biological data from Kennedy Lake, Stn. 2, Oct. 20, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	12.3	12.3	12.2	12.2	12.2	12.1	12.0	9.7
pH			6.8			6.9		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			3.42			3.43		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.4		3.2	2.6			2.9
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		82		76	88			80
Ammonia (µg $N \cdot L^{-1}$)		5		<4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		19		19	18			41
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		2		2	3			2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		1	1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		<1		1	<1			<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		730		760	730			710
Total dissolved solids (mg $\cdot L^{-1}$)		21.7						
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.78	0.63		1.00	0.63	0.61	0.92	1.21
Light bottle glucose turnover time (h)	776	387	235	425	282	422	412	346
Dark bottle glucose turnover time (h)		152		105	310			583
Total chlorophyll (µg $\cdot L^{-1}$)		1.64		1.83	1.77			0.28
Total algal numbers ($\times 10^8 \cdot m^{-3}$)		258		161	385			
Total algal volume ($mm^3 \cdot m^{-3}$)		366		372	368			
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)		256		159	383			19 [b]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)		81		79	76			3 [b]
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.95	2.20	1.70	1.49	0.68	0.28	0.31	0.06
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.22		0.95	0.12			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.81		0.31	0.43			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.17		0.23	0.13			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			10.25			10.75		
Total algal carbon (mg $C \cdot m^{-3}$)		42		42	44			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		16		16	16			<1 [b]

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton only

Appendix Table 129. Physical, chemical and biological data from Kennedy Lake Streams, October 20, 1981.

Stream	A	B	C
Surface temperature (°C)	12.1	10.7	13.6
Dissolved organic carbon (mg $C \cdot L^{-1}$)	6.3	2.5	3.3
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	143	80	121
Ammonia (µg $N \cdot L^{-1}$)	<4	10	7
Nitrate (µg $N \cdot L^{-1}$)	64	61	23
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	1	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1010	1240	690
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.89	0.67	1.17

Appendix Table 130. Physical, chemical and biological data from Kitlope Lake, August 28, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	12.0	11.5	11.0	7.5
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	77	46	104	86
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	5	<1	2	13
Total phosphorus (µg $P \cdot L^{-1}$)	4	5	6	3
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	4	4	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	460	470	470	550
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.53		0.82	0.70
Total chlorophyll (µg $\cdot L^{-1}$)	1.09	1.36	1.75	0.42
Total algal numbers ($x10^8 \cdot m^{-3}$)	17	9	6	
Total algal volume ($mm^3 \cdot m^{-3}$)	276	206	100	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	15	8	6	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	38	33	20	
Total algal carbon (mg $C \cdot m^{-3}$)	32	24	14	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	8	7	4	

Appendix Table 131. Physical, chemical and biological data from Long Lake, Stn. 1, March 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	5.0	4.8	4.8	4.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	8.8	4.5	7.8	7.8
Particulate carbon (µg $C \cdot L^{-1}$)	199	181	224	163
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	85	138	335	286
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	70	69	71	70
Particulate nitrogen (µg $N \cdot L^{-1}$)	24	16	17	15
Total phosphorus (µg $P \cdot L^{-1}$)	3	3	3	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	970	980	980	980
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.77	0.65	0.86	0.82
Total chlorophyll ($\mu g \cdot L^{-1}$)	<0.12	<0.12	<0.12	<0.12
Total algal numbers ($x10^8 \cdot m^{-3}$)[a]	7	4	7	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	43	42	40	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[a]	7	4	7	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	29	23	31	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	7	6	7	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	6	4	6	

[a] ultraphytoplankton not included

Appendix Table 132. Physical, chemical and biological data from Long Lake, Stn. 2, March 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	5.6	5.4	5.3	5.1
Dissolved organic carbon (mg $C \cdot L^{-1}$)	4.9	5.7	7.1	6.0
Particulate carbon (µg $C \cdot L^{-1}$)	159	160	154	145
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	222	237	330	224
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	65	66	66	64
Particulate nitrogen (µg $N \cdot L^{-1}$)	19	16	16	14
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	930	930	930	940
Total dissolved solids (mg $\cdot L^{-1}$)			14.5	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.62		0.91	0.79
Total chlorophyll (µg $\cdot L^{-1}$)	0.24	0.22	<0.12	<0.12
Total algal numbers ($x10^{8} \cdot m^{-3}$) [a]	3	3	3	
Total algal volume ($mm^{3} \cdot m^{-3}$) [a]	68	56	52	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$) [a]	2	3	3	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$) [a]	15	20	18	
Total algal carbon (mg $C \cdot m^{-3}$) [a]	6	6	5	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$) [a]	3	4	3	

[a] ultraphytoplankton not included

Appendix Table 133. Physical, chemical and biological data from Long Lake, Stn. 3, March 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	6.0	5.7	5.6	5.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	5.0		3.1	7.9
Particulate carbon (µg $C \cdot L^{-1}$)	132	158	155	155
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	313	517	329	399
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	63	63	63	63
Particulate nitrogen (µg $N \cdot L^{-1}$)	15	18	16	14
Total phosphorus (µg $P \cdot L^{-1}$)	4	2	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	2	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	2	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	920	940	920	930
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.68	0.82	1.00	0.68
Total chlorophyll (µg $\cdot L^{-1}$)	0.56	0.41	0.36	0.29
Total algal numbers ($\times 10^8 \cdot m^{-3}$)[a]	5	4	5	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	82	45	152	
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)[a]	4	4	4	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	22	20	27	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	8	6	12	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	4	4	5	

[a] ultraphytoplankton not included

Appendix Table 134. Physical, chemical and biological data from Long Lake Streams, March 10, 1981.

Stream	A	B	C
Surface temperature (^{o}C)	4.8	5.8	5.6
Dissolved organic carbon (mg $C \cdot L^{-1}$)	5.3		8.4
Particulate carbon (µg $C \cdot L^{-1}$)	81	72	246
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)			61
Ammonia (µg $N \cdot L^{-1}$)	12	<4	6
Nitrate (µg $N \cdot L^{-1}$)	51	80	66
Particulate nitrogen (µg $N \cdot L^{-1}$)	9	5	27
Total phosphorus (µg $P \cdot L^{-1}$)	2	<1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1800	1570	940
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.25	0.18	0.71

Appendix Table 135. Physical, chemical and biological data from Long Lake, Stn. 1, April 7, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	5.8	5.6	5.6	5.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.0	2.9	2.6	3.6
Particulate carbon (µg $C \cdot L^{-1}$)	155	164	114	197
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	175	142	155	130
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	53	61	61	64
Particulate nitrogen (µg $N \cdot L^{-1}$)	20	22	28	28
Total phosphorus (µg $P \cdot L^{-1}$)	2	3	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	2	2	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	960	960	945	970
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	1.52	1.40	0.70	1.01
Total chlorophyll (µg $\cdot L^{-1}$)	0.57	0.49	0.41	<0.12
Total algal numbers ($x10^8 \cdot m^{-3}$)[a]	4	4	3	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	45	59	62	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[a]	4	4	2	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	23	29	14	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	6	6	6	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	4	4	3	

[a] ultraphytoplankton not included

Appendix Table 136. Physical, chemical and biological data from Long Lake, Stn. 2, April 7, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	6.1	6.0	5.9	5.9	5.8	5.8	5.8	5.7
pH			6.8			6.8		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]			1.12			1.05		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		3.5		3.9	3.3			3.3
Particulate carbon (µg $C \cdot L^{-1}$)		140		123	122			197
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		138		251	287			227
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		57		58	59			60
Particulate nitrogen (µg $N \cdot L^{-1}$)		24		23	26			23
Total phosphorus (µg $P \cdot L^{-1}$)		1		1	2			2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	1			1
Particulate phosphorus (µg $P \cdot L^{-1}$)		1		<1	<1			<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		840	860	860			860	
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.97	0.92		1.20	0.92	0.80	0.88	0.94
Light bottle glucose turnover time (h)	841	333	348	748	793	244	1893	596
Dark bottle glucose turnover time (h)		435		2860	529			2985
Total chlorophyll (µg $\cdot L^{-1}$)		0.35		0.36	0.30			0.24
Total algal numbers ($\times 10^8 \cdot m^{-3}$)[b]		5		4	3			
Total algal volume ($mm^3 \cdot m^{-3}$)[b]		44		100	38			
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)[b]		5		4	3			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[b]		29		18	18			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	0.23	0.32	0.18	0.14	0.06	0.03	0.01	0.00
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.24		0.10	0.04			
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.08		0.04	0.02			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)[b]			3.12			2.87		
Total algal carbon (mg $C \cdot m^{-3}$)		7		8	5			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)		5		4	4			

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton not included

Appendix Table 137. Physical, chemical and biological data from Long Lake, Stn. 3, April 7, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	6.2	6.2	6.2	6.1
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.3	3.0	2.6	3.0
Particulate carbon (µg $C \cdot L^{-1}$)	140	117	138	135
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	261	257	398	217
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	60	60	60	61
Particulate nitrogen (µg $N \cdot L^{-1}$)	26	18	15	11
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	850	870	870	860
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.88	1.25	1.14	0.76
Total chlorophyll (µg $\cdot L^{-1}$)	0.56	0.67	0.56	0.27
Total algal numbers ($x10^8 \cdot m^{-3}$)[a]	4	4	5	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	159	155	245	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[a]	4	4	4	
Nanoplankton (m.d.20µ) volume[a] ($mm^3 \cdot m^{-3}$)	19	22	21	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	11	11	15	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	4	4	4	

[a] ultraphytoplankton not included

Appendix Table 138. Physical, chemical and biological data from Long Lake Streams, April 7, 1981.

Stream	A	B	C
Surface temperature (°C)	3.9	4.7	6.4
Dissolved organic carbon (mg $C \cdot L^{-1}$)	5.1	4.1	3.2
Particulate carbon (µg $C \cdot L^{-1}$)	90	86	141
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	91	83	93
Ammonia (µg $N \cdot L^{-1}$)	8	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	39	76	60
Particulate nitrogen (µg $N \cdot L^{-1}$)	6	6	18
Total phosphorus (µg $P \cdot L^{-1}$)	1	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1540	1360	860
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.31	0.19	0.82

Appendix Table 139. Physical, chemical and biological data from Long Lake, Stn. 1, May 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	9.5	8.6	8.0	5.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.6	3.0	2.8	3.4
Particulate carbon (µg $C \cdot L^{-1}$)	244	211	162	128
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	101	89	100	96
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	47	45	45	53
Particulate nitrogen (µg $N \cdot L^{-1}$)	33	44	40	24
Total phosphorus (µg $P \cdot L^{-1}$)	2	3	3	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	1	1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	2	3
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	940	940	940	940
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.59	0.64	0.73	1.04
Total chlorophyll (µg $\cdot L^{-1}$)	1.80	2.69	2.18	0.23
Total algal numbers ($x10^8 \cdot m^{-3}$)[a]	34	15	12	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	700	657	596	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[a]	33	14	11	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	234	99	65	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	66	45	38	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	43	18	12	

[a] ultraphytoplankton not included

Appendix Table 140. Physical, chemical and biological data from Long Lake, Stn. 2, May 12, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	10.0	9.4	9.0	8.9	8.6	8.3	8.0	6.8
pH			6.6			6.3		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			1.24			1.87		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.7		3.0	2.1			3.1
Particulate carbon (µg $C \cdot L^{-1}$)		317		225	167			151
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		167		87	100			102
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		46		45	45			57
Particulate nitrogen (µg $N \cdot L^{-1}$)		41		39	30			28
Total phosphorus (µg $P \cdot L^{-1}$)		2		4	2			3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		1		<1	<1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		2		2	2			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		890		880	880			910
Total dissolved solids (mg $\cdot L^{-1}$)					24.6			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.55	0.61		0.61	0.49	0.55	0.65	0.97
Light bottle glucose turnover time (h)	5436	374	421	565	622	182	343	168
Dark bottle glucose turnover time (h)		633		4157	246			1309
Total chlorophyll (µg $\cdot L^{-1}$)		3.33		2.22	2.22			0.40
Total algal numbers ($x10^8 \cdot m^{-3}$) [b]		31		30	24			
Total algal volume ($mm^3 \cdot m^{-3}$) [b]		706		818	866			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$) [b]		30		29	22			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$) [b]		267		179	158			
Total primary production > 0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.62	0.46		0.02	0.08	0.47	0.17	0.04
Total alkalinity (mg $\cdot L^{-1} CaCO_3$) [b]			3.12			3.24		
Total algal carbon (mg $C \cdot m^{-3}$) [b]		70		67	64			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$) [b]		48		34	29			

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton not included

Appendix Table 141. Physical, chemical and biological data from Long Lake, Stn. 3, May 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	9.1	8.7	8.3	6.8
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.0	2.9	2.8	3.3
Particulate carbon (µg $C \cdot L^{-1}$)	285	208	206	107
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	152	103	88	107
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	47	48	49	56
Particulate nitrogen (µg $N \cdot L^{-1}$)	38	34	45	19
Total phosphorus (µg $P \cdot L^{-1}$)	3	3	4	3
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	3	3	3	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	900	870	880	890
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.65	0.65	0.70	0.91
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.09	1.55	1.36	0.29
Total algal numbers ($x10^{8} \cdot m^{-3}$)[a]	26	18	13	
Total algal volume ($mm^{3} \cdot m^{-3}$)[a]	702	750	683	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)[a]	25	17	12	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)[a]	179	95	70	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	60	51	43	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	33	19	13	

[a] ultraphytoplankton not included

Appendix Table 142. Physical, chemical and biological data from Long Lake Streams, May 12, 1981.

Stream	A	B	C
Surface temperature (°C)	6.9	5.8	9.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.2	1.6	
Particulate carbon (µg $C \cdot L^{-1}$)	116	61	165
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	80	70	101
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	28	32	53
Particulate nitrogen (µg $N \cdot L^{-1}$)	16	4	28
Total phosphorus (µg $P \cdot L^{-1}$)	1	<1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1000	840	890
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.13	0.15	0.48

Appendix Table 143. Physical, chemical and biological data from Long Lake, Stn. 1, June 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	11.5	10.6	9.7	6.0
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.5	3.4	3.1	3.7
Particulate carbon (µg $C \cdot L^{-1}$)	249	266	211	111
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	77	76	99	90
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	17	18	20	57
Particulate nitrogen (µg $N \cdot L^{-1}$)	42	35	28	9
Total phosphorus (µg $P \cdot L^{-1}$)	2	1	1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	780	770	760	960
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.54	0.67	0.80	1.13
Total chlorophyll (µg $\cdot L^{-1}$)	1.19	1.55	1.77	0.18
Total algal numbers ($x10^8 \cdot m^{-3}$) [a]	24	23	13	
Total algal volume ($mm^3 \cdot m^{-3}$) [a]	679	659	433	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$) [a]	22	21	11	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$) [a]	114	109	64	
Total algal carbon (mg $C \cdot m^{-3}$) [a]	55	50	35	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$) [a]	22	20	11	

[a] ultraphytoplankton not included

Appendix Table 144. Physical, chemical and biological data from Long Lake, Stn. 2, June 9, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	13.6	12.7	12.3	11.8	10.6	9.7	8.9	6.9
pH			6.1			6.2		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]			2.13			2.28		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		3.2		3.1	3.7			4.1
Particulate carbon (µg $C \cdot L^{-1}$)		298		267	211			153
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		95		133	113			115
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			<4
Nitrate (µg $N \cdot L^{-1}$)		21		21	20			42
Particulate nitrogen (µg $N \cdot L^{-1}$)		31		46	30			23
Total phosphorus (µg $P \cdot L^{-1}$)		1		2	1			<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		840		830	800			960
Total dissolved solids (mg $\cdot L^{-1}$)		14.4			15.7			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.52	0.65		0.36	0.55	0.74	0.61	0.91
Light bottle glucose turnover time (h)	81	89	57	53	56	47	47	49
Total chlorophyll (µg $\cdot L^{-1}$)		1.59		2.28	2.35			0.33
Total algal numbers ($x10^8 \cdot m^{-3}$)[b]		19		14	11			
Total algal volume ($mm^3 \cdot m^{-3}$)[b]		561		379	450			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[b]		17		12	8			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[b]		105		76	49			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.82	2.25	1.74	1.07	0.30	0.26	0.03	0.02
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.04		0.41	0.16			
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.21		0.66	0.14			
Total alkalinity (mg $\cdot L^{-1}$ $CaCO_3$)			2.87			3.24		
Total algal carbon (mg $C \cdot m^{-3}$)[b]		49		34	37			
Nanoplankton (m.d.20µ) carbon ($x10^8 \cdot m^{-3}$)[b]		19		13	9			

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton not included

Appendix Table 145. Physical, chemical and biological data from Long Lake, Stn. 3, June 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	12.7	11.9	11.4	7.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)			2.5	8.0
Particulate carbon (µg $C \cdot L^{-1}$)	307	244	216	111
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	130	89	99	73
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	27	27	36	60
Particulate nitrogen (µg $N \cdot L^{-1}$)	33	35	28	8
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	2
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	880	870	810	900
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.42	0.76	0.65	0.80
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.19	2.22	2.03	0.31
Total algal numbers ($x10^8 \cdot m^{-3}$)[a]	14	19	16	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	384	473	325	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[a]	11	15	14	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	72	117	112	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	37	45	34	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	12	19	18	

[a] ultraphytoplankton not included

Appendix Table 146. Physical, chemical and biological data from Long Lake Streams, June 9, 1981.

Stream	A	B	C
Surface temperature (°C)	7.9	8.1	
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.4		3.8
Particulate carbon (µg $C \cdot L^{-1}$)	83	95	246
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	92	112	113
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	16	33	27
Particulate nitrogen (µg $N \cdot L^{-1}$)	7	6	26
Total phosphorus (µg $P \cdot L^{-1}$)	2	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	870	910	880
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.34	0.13	0.65

Appendix Table 147. Physical, chemical and biological data from Long Lake, Stn. 1, July 7, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	13.2	12.9	12.5	6.9
Dissolved organic carbon (mg $C \cdot L^{-1}$)	3.6	2.2	2.7	2.9
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	123	94	92	125
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	14
Nitrate (µg $N \cdot L^{-1}$)	7	7	8	41
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	1	1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	670	680	670	840
Total dissolved solids ($mg \cdot L^{-1}$)	14.3		14.8	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.49	0.68	1.02	0.77
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.93	2.25	1.96	<0.10
Total algal numbers ($x10^{8} \cdot m^{-3}$)[a]	17	21	15	
Total algal volume ($mm^{3} \cdot m^{-3}$)[a]	571	433	514	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)[a]	14	19	13	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)[a]	125	180	147	
Total algal carbon ($mg\ C \cdot m^{-3}$)[a]	60	53	52	
Nanoplankton (m.d.20µ) carbon ($mg\ C \cdot m^{-3}$)[a]	20	29	24	

[a] ultraphytoplankton not included

Appendix Table 148. Physical, chemical and biological data from Long Lake, Stn. 2, July 7, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	14.4	14.0	13.0	12.7	12.0	11.2	10.5	7.7
pH			6.7			6.5		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$) [a]			1.23			1.55		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.1		2.9	2.9			2.7
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		97		109	117			135
Ammonia (µg $N \cdot L^{-1}$)		<4		<4	<4			4
Nitrate (µg $N \cdot L^{-1}$)		13		19	17			45
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		1		1	1			1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		1		1	<1			<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		730		710	730			860
Total dissolved solids (mg $\cdot L^{-1}$)		16.7			12.7			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.56	0.61		0.85	0.62	0.72	0.67	0.82
Light bottle glucose turnover time (h)	191	234	87	87	71	178	129	930
Dark bottle glucose turnover time (h)		197		113	197			2449
Total chlorophyll (µg $\cdot L^{-1}$)		2.52		1.20	0.80			<0.10
Total algal numbers ($x10^8 \cdot m^{-3}$) [b]		23		11	8			
Total algal volume ($mm^3 \cdot m^{-3}$) [b]		602		189	308			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$) [b]		20		11	7			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$) [b]		198		68	64			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	2.52	1.76	1.13	0.54	0.13	0.00	0.00	0.00
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.67		0.17	0.06			
Fract. primary production >3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		1.09		0.37	0.07			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			3.49			3.37		
Total algal carbon (mg $C \cdot m^{-3}$) [b]		68		22	30			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$) [b]		33		12	9			

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton not included

Appendix Table 149. Physical, chemical and biological data from Long Lake, Stn. 3, July 7, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	13.6	13.0	12.3	8.1
Dissolved organic carbon ($mg \cdot C \cdot L^{-1}$)	2.6	2.6	2.5	2.9
Particulate carbon ($\mu g \cdot C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g \cdot N \cdot L^{-1}$)	90	156	89	79
Ammonia ($\mu g \cdot N \cdot L^{-1}$)	<4	5	<4	<4
Nitrate ($\mu g \cdot N \cdot L^{-1}$)	20	22	23	47
Particulate nitrogen ($\mu g \cdot N \cdot L^{-1}$)				
Total phosphorus ($\mu g \cdot P \cdot L^{-1}$)	1	1	1	1
Total dissolved phosphorus ($\mu g \cdot P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g \cdot P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g \cdot Si \cdot L^{-1}$)	760	760	770	860
Total dissolved solids ($mg \cdot L^{-1}$)	15.1		14.1	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.57	0.58	0.54	0.72
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.71	1.37	1.02	0.23
Total algal numbers ($x10^{8} \cdot m^{-3}$)[a]	18	15	8	
Total algal volume ($mm^{3} \cdot m^{-3}$)[a]	547	492	366	
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)[a]	15	12	6	
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)[a]	97	113	60	
Total algal carbon ($mg \cdot C \cdot m^{-3}$)[a]	57	54	33	
Nanoplankton (m.d.20μ) carbon ($mg \cdot C \cdot m^{-3}$)[a]	17	19	9	

[a]ultraphytoplankton not included

Appendix Table 150. Physical, chemical and biological data from Long Lake Streams, July 7, 1981.

Stream	A	B	C
Surface temperature (°C)	8.8	9.2	13.7
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.9	1.5	3.7
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	80	80	123
Ammonia (µg $N \cdot L^{-1}$)	4	7	4
Nitrate (µg $N \cdot L^{-1}$)	7	29	21
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	6	<1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	620	870	770
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.23	0.16	0.34

Appendix Table 151. Physical, chemical and biological data from Long Lake, Stn. 1, August 11, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	20.3	20.1	19.9	9.2
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.3	1.6	1.7	1.1
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	104	85	100	114
Ammonia (µg $N \cdot L^{-1}$)	<4	15	5	9
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	33
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	<2	2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	470	500	470	630
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.61	0.46	0.76	0.76
Total chlorophyll (µg $\cdot L^{-1}$)	2.72	1.87	2.25	0.37
Total algal numbers ($x10^8 \cdot m^{-3}$) [a]	19	19	18	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	1191	1400	1200	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[a]	10	9	9	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	56	53	76	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	114	129	105	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	11	10	13	

[a] ultraphytoplankton not included

Appendix Table 152. Physical, chemical and biological data from Long Lake, Stn. 2, Aug. 11, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	19.6	19.5	19.4	19.4	19.2	19.0	17.5	8.0
pH			6.6			6.8		
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]			0.74			0.87		
Dissolved organic carbon (mg $C \cdot L^{-1}$)		3.3		1.3	1.4			2.7
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		70		93	70			90
Ammonia (µg $N \cdot L^{-1}$)		7		<4	<4			5
Nitrate (µg $N \cdot L^{-1}$)		<1		<1	<1			31
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	<1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		<2		<2	<2			<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		650		660	660			780
Total dissolved solids (mg $\cdot L^{-1}$)		13.6			24.9			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.53	0.60		0.55	0.38	0.36	0.37	1.01
Light bottle glucose turnover time (h)	129	590	321	229	171	1350	162	256
Total chlorophyll (µg $\cdot L^{-1}$)		2.21		1.77	1.36			0.41
Total algal numbers ($x10^8 \cdot m^{-3}$)[b]		19		21	23			
Total algal volume ($mm^3 \cdot m^{-3}$)[b]		1101		1568	1567			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[b]		11		11	14			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[b]		71		63	100			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.15	1.06	0.89	0.87	0.88	0.35	0.11	0.00
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.53		0.41	0.43			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.27		0.21	0.24			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.26		0.27	0.21			
Total alkalinity (mg $\cdot L^{-1} CaCO_3$)			2.00			2.62		
Total algal carbon (mg $C \cdot m^{-3}$)[b]		92		114	120			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[b]		12		12	16			

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton not included

Appendix Table 153. Physical, chemical and biological data from Long Lake, Stn. 3, Aug. 11, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	20.6	20.0	19.2	8.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.3	1.8	1.0	3.0
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	97	106	92	101
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	6
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	1	54
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	1	1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<2	<2	<2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	670	670	680	870
Total dissolved solids (mg $\cdot L^{-1}$)	13.7		18.1	
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.33	0.38	0.51	0.87
Total chlorophyll (µg $\cdot L^{-1}$)	1.63	2.06	1.77	0.29
Total algal numbers ($x10^{8} \cdot m^{-3}$) [a]	24	23	21	
Total algal volume ($mm^{3} \cdot m^{-3}$) [a]	1898	2189	1490	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$) [a]	9	8	10	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$) [a]	74	67	74	
Total algal carbon (mg $C \cdot m^{-3}$) [a]	154	172	128	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$) [a]	13	11	12	

[a] ultraphytoplankton not included

Appendix Table 154. Physical, chemical and biological data from Long Lake Streams, August 11, 1981.

Stream	A	B	C
Surface temperature (°C)	12.6	15.6	19.7
Dissolved organic carbon (mg $C \cdot L^{-1}$)	0.7	1.2	1.0
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	88	74	90
Ammonia (µg $N \cdot L^{-1}$)	4	<4	5
Nitrate (µg $N \cdot L^{-1}$)	4	72	2
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)	14	1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	2	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	8	<2	<2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	330	1140	680
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.26	0.14	0.32

Appendix Table 155. Physical, chemical and biological data from Long Lake, Stn. 1, September 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.7	17.4	17.1	8.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	1.2	0.9	1.4	2.1
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	72	106	100	110
Ammonia (µg $N \cdot L^{-1}$)	<4	5	<4	12
Nitrate (µg $N \cdot L^{-1}$)	2	1	1	43
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	2	2	2	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	2	2	1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	600	600	600	790
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.33	0.80	1.15	0.41
Total chlorophyll (µg $\cdot L^{-1}$)	2.67	4.57	3.92	0.56
Total algal numbers ($\times 10^8 \cdot m^{-3}$)[a]	15	15	12	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	185	409	367	
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)[a]	14	12	9	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	75	72	45	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	24	39	33	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	14	13	9	

[a] ultraphytoplankton not included

Appendix Table 156. Physical, chemical and biological data from Long Lake, Stn. 2, Sept. 9, 1981.

Depth (m)	0	1	2	3	5	7.5	10	20
Temperature (°C)	18.4	18.4	18.4	18.2	17.1	16.0	15.2	7.8
pH			6.8					
Dissolved inorganic carbon (mg $C \cdot L^{-1}$)[a]			0.95					
Dissolved organic carbon (mg $C \cdot L^{-1}$)		2.3		2.1	2.2			8.3
Particulate carbon (µg $C \cdot L^{-1}$)								
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		91		117	123			117
Ammonia (µg $N \cdot L^{-1}$)		5		<4	4			<4
Nitrate (µg $N \cdot L^{-1}$)		1		2	7			12
Particulate nitrogen (µg $N \cdot L^{-1}$)								
Total phosphorus (µg $P \cdot L^{-1}$)		2		<1	1			1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)		<1		<1	1			<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		1		2	2			2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)		630		620	600			640
Total dissolved solids (mg $\cdot L^{-1}$)		16.9			13.2			
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.31	0.30		0.61	0.68	1.03	1.08	1.00
Light bottle glucose turnover time (h)	599	117	129	113	328	252	677	1425
Dark bottle glucose turnover time (h)		330		6617	891			158
Total chlorophyll (µg $\cdot L^{-1}$)		3.49		3.86	3.09			1.76
Total algal numbers ($x10^8 \cdot m^{-3}$)[b]		9		11	9			
Total algal volume ($mm^3 \cdot m^{-3}$)[b]		474		535	761			
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[b]		7		9	5			
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[b]		45		48	27			
Total primary production >0.2 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)	1.43	1.29	0.95	0.82	0.27	0.08	0.05	0.01
Fract. primary production 0.2-3.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.81		0.51	0.13			
Fract. primary production 3.0-8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.24		0.20	0.10			
Fract. primary production >8.0 µm (mg $C \cdot m^{-3} \cdot h^{-1}$)		0.24		0.11	0.04			
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)[b]			2.87					
Total algal carbon (mg $C \cdot m^{-3}$)[b]		39		41	52			
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[b]		8		9	5			

[a] values determined using the potentiometric method (APHA 1976)
[b] ultraphytoplankton not included

Appendix Table 157. Physical, chemical and biological data from Long Lake, Stn. 3, September 9, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	18.6	18.2	17.7	8.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.2	1.8	1.7	2.5
Particulate carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	131	65	76	26
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	16	<4
Nitrate (µg $N \cdot L^{-1}$)	6	6	4	60
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	<1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	2	1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	610	620	600	860
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.15	0.19	0.83	0.75
Total chlorophyll (µg $\cdot L^{-1}$)	2.95	2.69	2.13	0.64
Total algal numbers ($x10^{8} \cdot m^{-3}$)[a]	6	6	8	
Total algal volume ($mm^{3} \cdot m^{-3}$)[a]	80	172	348	
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)[a]	6	5	5	
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)[a]	33	25	33	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	11	18	33	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	6	5	6	

[a] ultraphytoplankton not included

Appendix Table 158. Physical, chemical and biological data from Long Lake Streams, September 9, 1981.

Stream	A	B	C
Surface temperature (°C)	11.6	13.9	19.3
Dissolved organic carbon (mg $C \cdot L^{-1}$)	2.0	2.3	1.7
Particulate carbon (µg $C \cdot L^{-1}$)			
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	73	112	76
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	19	94	2
Particulate nitrogen (µg $N \cdot L^{-1}$)			
Total phosphorus (µg $P \cdot L^{-1}$)		7	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	4	2	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)		5	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	480	1346	610
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.45	0.50	0.33

Appendix Table 159. Chemical and biological data from Lowe Lake, March 3, 1981.

Depth (m)	1	3	5	20
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	80	67	80	72
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	21	21	22	22
Total phosphorus (µg $P \cdot L^{-1}$)	1	2	3	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	430	420	410	410
Total chlorophyll (µg $\cdot L^{-1}$)	0.74	0.78	0.60	0.52
Total algal numbers ($x10^8 \cdot m^{-3}$)[a]	4	3	2	
Total algal volume ($mm^3 \cdot m^{-3}$)[a]	23	21	15	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)[a]	4	3	2	
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)[a]	15	19	6	
Total algal carbon (mg $C \cdot m^{-3}$)[a]	4	3	2	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)[a]	3	3	1	

[a] ultraphytoplankton not included

Appendix Table 160. Physical, chemical and biological data from Lowe Lake, August 28, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.4	17.3	17.2	6.5
Dissolved organic nitrogen (µg N·L^{-1})	115	138	95	106
Ammonia (µg N·L^{-1})	<4	<4	<4	<4
Nitrate (µg N·L^{-1})	4	2	3	17
Total phosphorus (µg P·L^{-1})	6			1
Particulate phosphorus (µg P·L^{-1})	3	1	1	<1
Soluble reactive silicon (µg Si·L^{-1})	490	500	490	460
Bacteria numbers (x10^{6}·mL^{-1})	0.93	0.90	1.90	0.75
Total chlorophyll (µg·L^{-1})	1.78	1.85	1.75	0.45
Total algal numbers (x10^{8}·m-3)	331	297	362	
Total algal volume (mm^{3}·m^{-3})	182	163	182	
Nanoplankton (m.d.20µ) numbers (x10^{8}·m^{-3})	331	297	361	5[a]
Nanoplankton (m.d.20µ) volume (mm^{3}·m^{-3})	167	134	150	1[a]
Total algal carbon (mg C·m^{-3})	39	33	38	
Nanoplankton (m.d.20µ) carbon (mg C·m^{-3})	37	29	33	<1[a]

[a]ultraphytoplankton only

Appendix Table 161. Physical, chemical and biological data from Sproat Lake, Stn. 1, March 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	7.6	7.6	7.4	6.0
Particulate Carbon (µg $C \cdot L^{-1}$)	157	105	123	118
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		64		72
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	14	13	13	16
Particulate nitrogen (µg $N \cdot L^{-1}$)	49	24	26	23
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)				
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1140	1140	1150	1140
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.71	1.12	0.74	0.88
Total Chlorophyll (µg $\cdot L^{-1}$)	0.85	0.86	0.87	0.67
Total algal numbers ($x10^8 \cdot m^{-3}$)	324	292	352	
Total algal volume ($mm^3 \cdot m^{-3}$)	102	94	139	
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	324	292	352	260[a]
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	72	77	89	14[a]
Total algal carbon (mg $C \cdot m^{-3}$)	17	17	20	
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	14	15	15	3[a]

[a] ultraphytoplankton only

Appendix Table 162. Physical, chemical and biological data from Sproat Lake, Stn. 2, March 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.0	7.6	7.2	6.2
Particulate Carbon (µg $C \cdot L^{-1}$)	123	113	173	110
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)		112		139
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	14	14	14	19
Particulate nitrogen (µg $N \cdot L^{-1}$)	23	22	34	18
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	2	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	1	1	1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1180	1190	1200	1150
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.61	0.71		0.82
Total Chlorophyll (µg $\cdot L^{-1}$)	0.97	1.01	1.27	0.43
Total algal numbers ($x10^{8} \cdot m^{-3}$)	459	263	354	183
Total algal volume ($mm^{3} \cdot m^{-3}$)	139	118	128	63
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	457	262	352	182
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	71	72	77	27
Total algal carbon (mg $C \cdot m^{-3}$)	23	19	22	8
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	15	15	16	5

Appendix Table 163. Physical, chemical and biological data from Sproat Lake, Stn. 3, March 13, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	7.7	7.5	7.4	6.2
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	215	230	223	137
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)		120		51
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	8	8	8	19
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	62	52	48	51
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1180	1210	1220	1210
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.89	0.97	0.67	0.73
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.14	1.47	1.66	0.65
Total algal numbers ($x10^{8} \cdot m^{-3}$)	359	230	390	265
Total algal volume ($mm^{3} \cdot m^{-3}$)	241	235	107	48
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	357	227	390	265
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	78	61	64	25
Total algal carbon ($mg\ C \cdot m^{-3}$)	28	27	17	7
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	14	11	13	5

Appendix Table 164. Physical, chemical and biological data from Sproat Lake, Stn. 4, March 13, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.3	8.0	7.3	6.2
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	163	177	205	137
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)		61		68
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	12	11	10	19
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	50	51	55	42
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	2	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1130	1140	1150	1160
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.68			0.70
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.94	1.49	1.10	0.50
Total algal numbers ($x10^{8} \cdot m^{-3}$)	333	325	418	138
Total algal volume ($mm^{3} \cdot m^{-3}$)	81	95	144	62
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	333	324	417	138
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	38	52	85	18
Total algal carbon ($mg\ C \cdot m^{-3}$)	12	14	23	7
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	8	11	17	4

Appendix Table 165. Physical, chemical and biological data from Sproat Lake, Stn. 1, April 10, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	7.6	7.6	7.6	7.2
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	169	227	176	97
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	59	66	53	53
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	11	12	9	16
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	21	25	23	15
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	1	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1140	1140	1140	1150
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.71	0.55	0.49	0.86
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.77	1.78	1.85	0.99
Total algal numbers ($x10^{8} \cdot m^{-3}$)	335	25	245	297
Total algal volume ($mm^{3} \cdot m^{-3}$)	152	170	286	147
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	333	23	242	295
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	39	41	75	33
Total algal carbon ($mg\ C \cdot m^{-3}$)	22	23	34	20
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	8	8	10	7

Appendix Table 166. Physical, chemical and biological data from Sproat Lake, Stn. 2, April 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	9.1	9.1	9.1	7.1
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	162	183	144	105
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	61	51	63	54
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	44
Nitrate ($\mu g\ N \cdot L^{-1}$)	4	5	5	24
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	28	24	21	17
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	2	1	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	2	<1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1130	1130	1130	1170
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.48	0.48	0.67	0.80
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.66	1.52	1.62	1.10
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	346	238	287	391
Total algal volume ($mm^3 \cdot m^{-3}$)	229	202	170	145
Nanoplankton (m.d.20μ) numbers ($\times 10^8 \cdot m^{-3}$)	345	237	286	390
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	99	65	106	40
Total algal carbon ($mg\ C \cdot m^{-3}$)	34	28	27	19
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	20	13	20	8

Appendix Table 167. Physical, chemical and biological data from Sproat Lake, Stn. 3, April 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	8.9	8.8	8.8	6.4
Particulate Carbon (µg $C \cdot L^{-1}$)	154	180	163	111
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	53	64	67	72
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	2	2	1	16
Particulate nitrogen (µg $N \cdot L^{-1}$)	27	23	30	26
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	2	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1150	1140	1140	1800
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.48	0.61	0.62	0.70
Total Chlorophyll (µg $\cdot L^{-1}$)	1.25	1.25	1.26	1.33
Total algal numbers ($x10^{8} \cdot m^{-3}$)	410	273	355	557
Total algal volume ($mm^{3} \cdot m^{-3}$)	133	422	157	135
Nanoplankton (m.d.20µ) numbers ($x10^{8} \cdot m^{-3}$)	409	270	354	555
Nanoplankton (m.d.20µ) volume ($mm^{3} \cdot m^{-3}$)	77	227	91	52
Total algal carbon (mg $C \cdot m^{-3}$)	20	50	25	19
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	15	32	18	11

Appendix Table 168. Physical, chemical and biological data from Sproat Lake, Stn. 4, April 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	9.3	9.2	9.2	7.8
Particulate Carbon (µg $C \cdot L^{-1}$)	143	177	168	130
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	126	135	53	53
Ammonia (µg $N \cdot L^{-1}$)	4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	3	3	3	12
Particulate nitrogen (µg $N \cdot L^{-1}$)	24	25	30	19
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	2	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	1	1	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1110	1060	1120	1150
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.46	0.77	0.36	0.65
Total Chlorophyll (µg $\cdot L^{-1}$)	1.46	1.52	1.50	1.00
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	329	293	311	520
Total algal volume ($mm^3 \cdot m^{-3}$)	161	154	202	145
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	329	293	310	519
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	73	73	80	72
Total algal carbon (mg $C \cdot m^{-3}$)	23	21	29	23
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	16	13	15	15

Appendix Table 169. Physical, chemical and biological data from Sproat Lake, Stn. 1, May 15, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	11.7	11.5	11.3	6.7
Particulate Carbon (µg $C \cdot L^{-1}$)	217	200	193	174
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	104	65	104	121
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	3	3	3	21
Particulate nitrogen (µg $N \cdot L^{-1}$)	22	11	23	29
Total phosphorus (µg $P \cdot L^{-1}$)	<1	1	1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1140	1150	1150	1160
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.57	0.58	0.54	0.85
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.70	0.63	0.81	1.92
Total algal numbers ($x10^8 \cdot m^{-3}$)	257	246	278	408
Total algal volume ($mm^3 \cdot m^{-3}$)	402	457	450	252
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	256	244	275	406
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	179	184	152	105
Total algal carbon (mg $C \cdot m^{-3}$)	45	52	51	28
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	24	28	22	14

Appendix Table 170. Physical, chemical and biological data from Sproat Lake, Stn. 2, May 15, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	14.0	13.5	12.9	6.9
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	166	140	128	99
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	98	94	156	84
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	2	1	24
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	33	19	25	25
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	2	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	1	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1130	1130	1130	1180
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.62	0.59	0.59	1.22
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.65	0.57	0,64	0.69
Total algal numbers ($x10^{8} \cdot m^{-3}$)	341	192	366	531
Total algal volume ($mm^{3} \cdot m^{-3}$)	333	260	304	173
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	339	191	365	530
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	131	103	131	72
Total algal carbon ($mg\ C \cdot m^{-3}$)	41	30	40	26
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	26	17	27	15

Appendix Table 171. Physical, chemical and biological data from Sproat Lake, Stn. 3, May 15, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.0	12.6	12.3	6.8
Particulate Carbon (µg $C \cdot L^{-1}$)	125	132	132	104
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	64	60	74	87
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	4	2	1	19
Particulate nitrogen (µg $N \cdot L^{-1}$)	23	32	22	23
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	1	1	1	2
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1150	1150	1150	1220
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.55	0.71	0.59	0.79
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.71	0.58	0.50	1.41
Total algal numbers ($x10^8 \cdot m^{-3}$)	295	326	192	665
Total algal volume ($mm^3 \cdot m^{-3}$)	370	221	272	186
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	293	325	191	664
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	185	109	116	86
Total algal carbon (mg $C \cdot m^{-3}$)	45	29	34	28
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	28	20	21	18

Appendix Table 172. Physical, chemical and biological data from Sproat Lake, Stn. 4, May 15, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.5	13.2	13.0	7.0
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)	128	131	117	159
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	63	67	90	55
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	1	1	13
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)	20	26	24	28
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	1	<1	2
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	2	2	2	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1130	1130	1140	1160
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.54	0.43	0.57	0.92
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.62	0.56	0.54	1.35
Total algal numbers ($x10^{8} \cdot m^{-3}$)	216	244	229	516
Total algal volume ($mm^{3} \cdot m^{-3}$)	289	284	257	276
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	214	242	228	514
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	101	80	93	85
Total algal carbon ($mg\ C \cdot m^{-3}$)	36	31	30	38
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	20	15	16	18

Appendix Table 173. Physical, chemical and biological data from Sproat Lake, Stn. 1, June 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	14.9	14.6	14.3	7.4
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	85	104	105	112
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	1	1	1	13
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1150	1150	1140	1180
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.31	0.34	0.37	0.92
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.28	0.52	0.52	0.49
Total algal numbers ($x10^8 \cdot m^{-3}$)	398	190	250	487
Total algal volume ($mm^3 \cdot m^{-3}$)	369	398	491	356
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	396	188	247	484
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	83	47	74	68
Total algal carbon (mg $C \cdot m^{-3}$)	37	33	41	37
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	18	9	13	13

Appendix Table 174. Physical, chemical and biological data from Sproat Lake, Stn. 2, June 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	16.1	16.0	15.2	7.0
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	114	103	100	136
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	2	1	1	23
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1130	1130	1130	1130
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.52	0.62	0.55	0.89
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.51	0.46	0.65	1.83
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	236	173	201	531
Total algal volume ($mm^3 \cdot m^{-3}$)	624	604	549	316
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	232	169	197	529
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	58	90	51	74
Total algal carbon (mg $C \cdot m^{-3}$)	53	57	46	33
Nanoplankton (m.d.20µ) carbon (mg $C.m^{-3}$)	10	17	8	14

Appendix Table 175. Physical, chemical and biological data from Sproat Lake, Stn. 3, June 12, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	15.2	15.2	15.1	6.9
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	123	81	111	81
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	2	1	1	20
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1160	1200	1160	1240
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.52	0.40	0.43	0.88
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.52	0.54	0.54	1.66
Total algal numbers ($x10^{8} \cdot m^{-3}$)	279	227	225	698
Total algal volume ($mm^{3} \cdot m^{-3}$)	784	614	592	272
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	274	224	222	696
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	75	58	75	104
Total algal carbon ($mg\ C \cdot m^{-3}$)	62	50	53	31
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	15	10	15	17

Appendix Table 176. Physical, chemical and biological data from Sproat Lake, Stn. 4, June 12, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	15.7	15.3	14.7	6.8
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	80	81	84	87
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	2	2	25
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1140	1120	1140	1220
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.46	0.39	0.45	0.88
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.43	0.41	0.50	1.33
Total algal numbers ($x10^{8} \cdot m^{-3}$)	199	220	225	530
Total algal volume ($mm^{3} \cdot m^{-3}$)	581	667	573	267
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	195	216	221	528
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	40	66	81	63
Total algal carbon ($mg\ C \cdot m^{-3}$)	43	54	52	30
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	7	12	16	12

Appendix Table 177. Physical, chemical and biological data from Sproat Lake, Stn. 1, July 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.4	17.3	17.2	7.8
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	65	74	73	60
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	7
Nitrate (µg $N \cdot L^{-1}$)	1	<1	<1	13
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1120	1120	1120	1150
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.53	0.27	0.24	0.84
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.52	0.51	0.61	2.53
Total algal numbers ($x10^8 \cdot m^{-3}$)	172	171	167	449
Total algal volume ($mm^3 \cdot m^{-3}$)	314	318	323	738
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	170	169	165	444
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	85	73	81	80
Total algal carbon (mg $C \cdot m^{-3}$)	35	32	35	61
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	16	12	13	14

Appendix Table 178. Physical, chemical and biological data from Sproat Lake, Stn. 2, July 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	18.3	18.2	18.1	7.5
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	84	76	122	110
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	1	1	1	16
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1100	1100	1090	1160
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.32	0.41	0.33	0.56
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.67	0.58	0.46	3.93
Total algal numbers ($x10^8 \cdot m^{-3}$)	441	99	107	289
Total algal volume ($mm^3 \cdot m^{-3}$)	407	225	372	605
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	439	98	105	284
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	111	90	57	55
Total algal carbon (mg $C \cdot m^{-3}$)	57	32	44	50
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	23	18	10	10

Appendix Table 179. Physical, chemical and biological data from Sproat Lake, Stn. 3, July 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	17.6	17.4	17.2	7.0
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	83	99	104	114
Ammonia ($\mu g\ N \cdot L^{-1}$)	6	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	1	1	3
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	1	1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1120	1130	1110	1190
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.50	0.32	0.39	0.68
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.52	0.80	0.47	3.77
Total algal numbers ($x10^{8} \cdot m^{-3}$)	272	272	444	470
Total algal volume ($mm^{3} \cdot m^{-3}$)	324	315	458	1374
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	270	270	442	458
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	99	98	118	130
Total algal carbon ($mg\ C \cdot m^{-3}$)	45	45	57	125
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	21	21	24	24

Appendix Table 180. Physical, chemical and biological data from Sproat Lake, Stn. 4, July 10, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	18.6	18.3	18.1	7.4
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	126	128	120	143
Ammonia (µg $N \cdot L^{-1}$)	<4	9	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	1	1	1	13
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1110	1100	1100	1150
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.40	0.35	0.38	0.98
Total Chlorophyll (µg $\cdot L^{-1}$)	0.53	0.45	0.43	2.63
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	188	247	141	341
Total algal volume ($mm^3 \cdot m^{-3}$)	311	370	260	1440
Nanoplankton (m.d.20µ) numbers ($\times 10^8 \cdot m^{-3}$)	186	245	140	327
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	67	78	80	102
Total algal carbon (mg $C \cdot m^{-3}$)	38	45	34	116
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	14	15	16	18

Appendix Table 181. Physical, chemical and biological data from Sproat Lake, Stn. 1, Aug. 17, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	23.8	23.4	23.2	7.4
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	105	112	90	125
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	2
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	2
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1090	1090	1100	1080
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.19	0.16	0.32	0.60
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.26	0.85	0.51	1.87
Total algal numbers ($x10^8 \cdot m^{-3}$)	218	169	141	538
Total algal volume ($mm^3 \cdot m^{-3}$)	121	159	94	1285
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	217	168	140	527
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	59	17	34	77
Total dissolved solids ($mg \cdot L^{-1}$)	40.0		41.0	
Total algal carbon (mg $C \cdot m^{-3}$)	19	20	14	98
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	13	4	7	14

Appendix Table 182. Physical, chemical and biological data from Sproat Lake, Stn. 2, Aug. 17, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	24.0	23.4	22.7	7.9
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	87	84	58	68
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	7
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1	<1	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	2
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1110	1100	1090	1140
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.70	0.49	0.43	0.32
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.13	0.82	0.29	2.04
Total algal numbers ($x10^{8} \cdot m^{-3}$)	162	236	42	565
Total algal volume ($mm^{3} \cdot m^{-3}$)	146	173	101	1159
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	161	235	42	555
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	36	54	46	107
Total algal carbon ($mg\ C \cdot m^{-3}$)	21	26	14	94
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	8	12	9	20

Appendix Table 183. Physical, chemical and biological data from Sproat Lake, Stn. 3, Aug. 17, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	24.3	24.1	23.0	7.7
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	72	72	109	105
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1130	1140	1150	1170
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	0.16	0.29	0.31	0.78
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.30	0.37	0.43	4.78
Total algal numbers ($x10^{8} \cdot m^{-3}$)	3[a]	107	202	457
Total algal volume ($mm^{3} \cdot m^{-3}$)	61[a]	76	165	1029
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	3[a]	107	201	447
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	15[a]	22	59	90
Total dissolved solids ($mg \cdot L^{-1}$)	40.0		39.0	
Total algal carbon ($mg\ C \cdot m^{-3}$)	7[a]	10	23	83
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	3[a]	5	13	16

[a] ultraphytoplankton not included; not included in mean

Appendix Table 184. Physical, chemical and biological data from Sproat Lake, Stn. 4, Aug. 17, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	24.7	24.2	22.0	7.6
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	49	162	94	127
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	11
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1130	1130	1120	1170
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.18	0.18	0.25	0.67
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.50	0.36	0.72	2.18
Total algal numbers ($x10^8 \cdot m^{-3}$)	196	6[a]	274	783
Total algal volume ($mm^3 \cdot m^{-3}$)	185	146[a]	156	1086
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	195	5[a]	274	774
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	47	31[a]	116	102
Total algal carbon (mg $C \cdot m^{-3}$)	24	18[a]	29	89
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	9	6[a]	25	20

[a] ultraphytoplankton not included; not included in mean

Appendix Table 185. Physical, chemical and biological data from Sproat Lake, Stn. 1, August 18, 1981.

Depth (m)	0	1	2	3	4	5	6	7
Temperature (°C)	23.3	23.3	23.3	23.3	23.3	23.2	22.9	21.0
Buoyancy frequency ($\cdot s^{-2}$)	0.000	0.000	0.000	0.000	0.000	0.015	0.052	0.138
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)								
Ammonia ($\mu g\ N \cdot L^{-1}$)	6	<4	<4	<4	4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	4	<1	<1	<1	<1	2	<1	<1
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)								
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	<1	<1	<1	1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1150	1150	1160	1160	1150	1140	1150	1160
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.42	0.50	0.35	0.56	0.33	0.28	0.31	0.28
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.20	0.10	0.09	0.14	0.08	0.08	0.09	0.14
Total algal numbers ($x10^8 \cdot m^{-3}$)	330	365	141	248	105	291	189	294
Total algal volume ($mm^3 \cdot m^{-3}$)	48	100	62	69	53	99	91	116
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	330	365	140	248	105	290	188	294
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	48	82	23	31	17	64	49	88
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.33	1.64	1.38	1.45	1.32	1.35	1.39	0.81
pH	7.6	7.6		7.7		7.3		
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)	23.95	24.08		23.70		22.50		
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$) [a]	6.05	6.11		5.97		6.00		
Total algal carbon ($mg\ C \cdot m^{-3}$)	11	22	10	11	8	19	16	23
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	11	20	5	7	4	16	12	20

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 185. Cont'd.

Depth (m)	8	9	10	11	12	13	14	15
Temperature (°C)	19.7	18.2	14.9	13.2	11.5	10.5	9.6	9.0
Buoyancy frequency (s^{-2})	0.052	0.053	0.074	0.048	0.044	0.031	0.028	0.021
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)								
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1	7	<1	<1	<1
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)								
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	<1	1	1	2	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1170	1170	1170	1160	1130	1120	1100	1120
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.53	0.37	0.37	0.61	0.49	0.76	0.77	0.42
Total chlorophyll ($\mu g \cdot L^{-1}$)	0.23	0.31	0.36	0.46	0.57	0.77	0.83	0.98
Total algal numbers ($x10^8 \cdot m^{-3}$)	246	399	461	528	978	101	851	814
Total algal volume ($mm^3 \cdot m^{-3}$)	88	170	142	140	148	118	197	265
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	246	399	460	527	978	100	851	812
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	62	120	104	75	100	38	103	81
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	1.41	1.40	0.83	1.07	1.08	0.86	0.89	0.88
pH			7.5					7.7
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)			23.50					23.80
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]			6.05					6.08
Total algal carbon ($mg\ C \cdot m^{-3}$)	15	33	26	25	28	15	31	34
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	12	27	23	17	23	7	22	18

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 185. Cont'd.

Depth (m)	16	17	18	19	20	21	22	23
Temperature (°C)	8.5	8.1	7.9	7.6	7.4	7.3	7.1	6.9
Buoyancy frequency ($\cdot s^{-2}$)	0.019	0.016	0.011	0.013	0.010	0.007	0.010	0.010
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)								
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	<1	<1	<1	3	10
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)								
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	2	1	2	2	2	2	1	1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1120	1120	1120	1130	1150	1100	1150	1160
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.69	0.63	0.64	0.62	0.81	0.84	0.86	0.95
Total chlorophyll ($\mu g \cdot L^{-1}$)	1.10	1.13	1.12	1.75	1.73	1.92	2.12	2.55
Total algal numbers ($x10^8 \cdot m^{-3}$)	664	694	860	905	454	645	734	655
Total algal volume ($mm^3 \cdot m^{-3}$)	419	381	479	504	433	697	858	700
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	661	690	855	901	450	639	726	648
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	73	80	79	114	72	90	129	64
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.78	0.27	0.00	0.26	0.26	0.27	0.12	0.10
pH					7.2			
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)					22.60			
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$) [a]					6.41			
Total algal carbon ($mg\ C \cdot m^{-3}$)	43	38	46	51	41	62	78	64
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	16	15	17	22	13	17	23	14

[a] values determined using the potentiometric method (APHA 1976)

Appendix Table 185. Cont'd.

Depth (m)	24	25	26	27	28	29	30	50
Temperature (°C)	6.7	6.5	6.4	6.3	6.2	6.2	6.1	
Buoyancy frequency ($\cdot s^{-2}$)	0.009	0.009	0.006	0.006	0.006	0.000	0.006	
Particulate carbon ($\mu g\ C \cdot L^{-1}$)								
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)								57
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	11	17	22	32	27	32	34	46
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)								
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	2	1	1	2	3
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1200	1170	1230	1220	1230	1220	1240	1290
Bacteria numbers ($\times 10^{6} \cdot mL^{-1}$)	0.88	0.86	0.79	0.72	0.80	0.63	0.54	0.40
Total chlorophyll ($\mu g \cdot L^{-1}$)	2.49	2.46	2.32	1.19	1.56	1.10	0.90	0.09
Total algal numbers ($\times 10^{8} \cdot m^{-3}$)	736	634	378	278	390	186	86	14
Total algal volume ($mm^{3} \cdot m^{-3}$)	901	601	434	274	281	198	150	58
Nanoplankton (m.d.20μ) numbers ($\times 10^{8} \cdot m^{-3}$)	728	629	374	275	388	184	85	13
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	88	59	65	32	57	31	25	10
Total primary production > 0.2 μm ($mg\ C \cdot m^{-3} \cdot h^{-1}$)	0.00	0.00	0.00	0.14	0.00	0.00	0.00	
pH		7.2					6.8	
Total alkalinity ($mg \cdot L^{-1} CaCO_3$)		21.80					22.00	
Dissolved inorganic carbon ($mg\ C \cdot L^{-1}$)[a]		6.27					7.60	
Total algal carbon ($mg\ C \cdot m^{-3}$)	79	53	41	25	28	18	14	5
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	18	13	12	6	11	6	4	1

[a]values determined using the potentiometric method (APHA 1976)

Appendix Table 186. Physical, chemical and biological data from Sproat Lake, Stn. 1, Sept. 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	19.4	19.3	19.2	7.8
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	90	87	89	79
Ammonia (µg $N \cdot L^{-1}$)	<4	<4	8	4
Nitrate (µg $N \cdot L^{-1}$)	1	2	2	2
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	2	1	1	<1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	1	<1	1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1100	1080	1095	1040
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.68	0.63	0.30	1.26
Total Chlorophyll (µg $\cdot L^{-1}$)	0.57	0.57	0.56	2.64
Total algal numbers ($x10^8 \cdot m^{-3}$)	252	228	102	738
Total algal volume ($mm^3 \cdot m^{-3}$)	210	101	140	273
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	252	228	101	736
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	86	68	83	84
Total algal carbon (mg $C \cdot m^{-3}$)	32	18	24	34
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	19	14	17	20

Appendix Table 187. Physical, chemical and biological data from Sproat Lake, Stn. 2, Sept. 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	20.2	20.1	19.8	7.9
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	113	100	97	75
Ammonia (µg $N \cdot L^{-1}$)	<4	4	<4	<4
Nitrate (µg $N \cdot L^{-1}$)	2	3	2	8
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	1	1	1	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	1	2	1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1060	1060	1070	1100
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.17	0.60	0.39	1.03
Total Chlorophyll (µg $\cdot L^{-1}$)	0.64	0.62	0.62	2.92
Total algal numbers ($x10^8 \cdot m^{-3}$)	52	254	3	840
Total algal volume ($mm^3 \cdot m^{-3}$)	114	169	79	330
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	52	253	2	837
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	43	96	21	140
Total algal carbon (mg $C \cdot m^{-3}$)	17	30	10	46
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	9	21	3	29

Appendix Table 188. Physical, chemical and biological data from Sproat Lake, Stn. 3, Sept. 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	19.8	19.6	19.4	7.9
Particulate Carbon ($\mu g \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	98	75	66	75
Ammonia ($\mu g \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g \cdot L^{-1}$)	1	1	2	4
Particulate nitrogen ($\mu g \cdot L^{-1}$)				
Total phosphorus ($\mu g \cdot L^{-1}$)	<1	<1	<1	<1
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	<1	1	1	<1
Particulate phosphorus ($\mu g \cdot L^{-1}$)	<1	<1	<1	1
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	1070	1080	1080	1100
Bacteria numbers ($\times 10^6 \cdot mL^{-1}$)	0.73	0.61		1.54
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.63	0.58	0.59	2.52
Total algal numbers ($\times 10^8 \cdot m^{-3}$)	89	275	354	667
Total algal volume ($mm^3 \cdot m^{-3}$)	97	169	190	1341
Nanoplankton (m.d.20μ) numbers ($\times 10^8 \cdot m^{-3}$)	88	274	353	655
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	48	89	116	164
Total algal carbon ($mg \cdot m^{-3}$)	15	30	35	120
Nanoplankton (m.d.20μ) carbon ($mg \cdot m^{-3}$)	10	20	26	33

Appendix Table 189. Physical, chemical and biological data from Sproat Lake, Stn. 4, Sept. 12, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	19.9	19.7	19.6	7.9
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	122	96	115	103
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	4
Nitrate ($\mu g\ N \cdot L^{-1}$)	1	6	2	7
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	1		1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1700	1730	1720	1730
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.21	0.76	0.52	1.08
Total Chlorophyll ($\mu g \cdot L^{-1}$)	0.53	0.57	0.58	2.72
Total algal numbers ($x10^8 \cdot m^{-3}$)	23	112	127	1058
Total algal volume ($mm^3 \cdot m^{-3}$)	94	200	148	1302
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	23	111	126	1046
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	36	89	41	211
Total algal carbon ($mg\ C \cdot m^{-3}$)	14	32	19	125
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	7	20	8	45

Appendix Table 190. Physical, chemical and biological data from Sproat Lake, Stn. 1, Oct. 16, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.4	13.3	13.2	8.5
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	127	176	116	84
Ammonia (µg $N \cdot L^{-1}$)	5		4	10
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	<1	<1	2	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1110	1110	1110	1060
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.64	0.87	0.50	0.53
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.00	0.98	0.98	1.00
Total algal numbers ($x10^8 \cdot m^{-3}$)	668	385	647	428
Total algal volume ($mm^3 \cdot m^{-3}$)	369	146	175	340
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	667	384	646	424
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	145	82	104	64
Total algal carbon (mg $C \cdot m^{-3}$)	57	23	28	34
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	31	15	20	12

Appendix Table 191. Physical, chemical and biological data from Sproat Lake, Stn. 2, Oct. 16, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.4	13.3	13.2	8.1
Particulate Carbon (µg $C \cdot L^{-1}$)				
Dissolved organic nitrogen (µg $N \cdot L^{-1}$)	124	157	124	110
Ammonia (µg $N \cdot L^{-1}$)	<4	6	4	<4
Nitrate (µg $N \cdot L^{-1}$)	<1	<1	<1	<1
Particulate nitrogen (µg $N \cdot L^{-1}$)				
Total phosphorus (µg $P \cdot L^{-1}$)	1	2	3	1
Total dissolved phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus (µg $P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon (µg $Si \cdot L^{-1}$)	1120	1130	1120	1090
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.88	1.22	0.75	0.94
Total Chlorophyll (µg $\cdot L^{-1}$)	1.48	1.63	1.60	1.53
Total algal numbers ($x10^8 \cdot m^{-3}$)	411	705	531	583
Total algal volume ($mm^3 \cdot m^{-3}$)	236	338	302	744
Nanoplankton (m.d.20µ) numbers ($x10^8 \cdot m^{-3}$)	410	703	529	575
Nanoplankton (m.d.20µ) volume ($mm^3 \cdot m^{-3}$)	111	174	104	68
Total algal carbon (mg $C \cdot m^{-3}$)	34	57	41	63
Nanoplankton (m.d.20µ) carbon (mg $C \cdot m^{-3}$)	22	39	21	14

Appendix Table 192. Physical, chemical and biological data from Sproat Lake, Stn. 3, Oct. 16, 1981.

Depth (m)	1	3	5	20
Temperature (^{o}C)	13.4	13.3	13.2	8.3
Particulate Carbon ($\mu g\ C \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g\ N \cdot L^{-1}$)	118	118	107	103
Ammonia ($\mu g\ N \cdot L^{-1}$)	<4	<4	<4	<4
Nitrate ($\mu g\ N \cdot L^{-1}$)	<1	<1	<1	2
Particulate nitrogen ($\mu g\ N \cdot L^{-1}$)				
Total phosphorus ($\mu g\ P \cdot L^{-1}$)	1	1	1	1
Total dissolved phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	1	<1
Particulate phosphorus ($\mu g\ P \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g\ Si \cdot L^{-1}$)	1140	1120	1120	1120
Bacteria numbers ($x10^{6} \cdot mL^{-1}$)	1.04	0.69	0.67	0.84
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.20	1.17	1.38	1.51
Total algal numbers ($x10^{8} \cdot m^{-3}$)	711	431	361	811
Total algal volume ($mm^{3} \cdot m^{-3}$)	241	269	213	329
Nanoplankton (m.d.20μ) numbers ($x10^{8} \cdot m^{-3}$)	710	429	360	808
Nanoplankton (m.d.20μ) volume ($mm^{3} \cdot m^{-3}$)	156	102	88	100
Total algal carbon ($mg\ C \cdot m^{-3}$)	43	40	32	40
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	34	21	18	22

Appendix Table 193. Physical, chemical and biological data from Sproat Lake, Stn. 4, Oct. 16, 1981.

Depth (m)	1	3	5	20
Temperature (°C)	13.3	13.2	13.1	8.5
Particulate Carbon ($\mu g \cdot L^{-1}$)				
Dissolved organic nitrogen ($\mu g \cdot L^{-1}$)	75	77	120	129
Ammonia ($\mu g \cdot L^{-1}$)	5	<4	8	<4
Nitrate ($\mu g \cdot L^{-1}$)	<1	<1	<1	3
Particulate nitrogen ($\mu g \cdot L^{-1}$)				
Total phosphorus ($\mu g \cdot L^{-1}$)	2	1	2	2
Total dissolved phosphorus ($\mu g \cdot L^{-1}$)	<1	<1	<1	<1
Particulate phosphorus ($\mu g \cdot L^{-1}$)	<1	<1	<1	<1
Soluble reactive silicon ($\mu g \cdot L^{-1}$)	1120	1120	1130	1110
Bacteria numbers ($x10^6 \cdot mL^{-1}$)	0.63	0.93	0.83	0.76
Total Chlorophyll ($\mu g \cdot L^{-1}$)	1.45	1.53	1.57	1.45
Total algal numbers ($x10^8 \cdot m^{-3}$)	582	571	551	457
Total algal volume ($mm^3 \cdot m^{-3}$)	312	352	255	390
Nanoplankton (m.d.20μ) numbers ($x10^8 \cdot m^{-3}$)	581	570	549	453
Nanoplankton (m.d.20μ) volume ($mm^3 \cdot m^{-3}$)	107	93	85	59
Total algal carbon ($mg\ C \cdot m^{-3}$)	45	47	35	38
Nanoplankton (m.d.20μ) carbon ($mg\ C \cdot m^{-3}$)	21	19	17	13

Appendix Table 194. Total phosphorus analysis (μg P·g dry weight^{-1}) from sediments of 1981 study lakes.

Lake and Station	Date	Depth of sediment sample (m)	Total phosphorus (μg P·g dry weight^{-1})
Bonilla-1	27/8/81	25	316
Bonilla-2	27/8/81	73	382
Bonilla-3	27/8/81	65	364
Curtis-1	26/8/81	67	568
Curtis-2	26/8/81	66	492
Curtis-3	26/8/81	33	336
Great Central-2	21/8/81	52	210
Kennedy-1	12/8/81	95	490
Kennedy-2	12/8/81	82	248
Sproat-1	19/8/81	60	366